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OM protein - protein search, using sw model

Run on: March 18, 2004, 04:07:52 ; Search time 46 Seconds
(without alignments)
2443.187 Million cell updates/sec

Title: US-09-985-689A-1-COPY

Perfect score: 2247
Sequence: 1 NDVARGIVKADVAQSSYGLY.....EVQAYNPVGPQTSLAIN 434

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 1049977 seqs, 25895339 residues

Total number of hits satisfying chosen parameters: 1049977

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications AA:

- 1: /cgn2_6/prodata/2/pubpaa/US07_PUBCOMB.pep.*
- 2: /cgn2_6/prodata/2/pubpaa/PCT_NEW_PUB.pep.*
- 3: /cgn2_6/prodata/2/pubpaa/US05_NEW_PUB.pep.*
- 4: /cgn2_6/prodata/2/pubpaa/US06_PUBCOMB.pep.*
- 5: /cgn2_6/prodata/2/pubpaa/US07_NEW_PUB.pep.*
- 6: /cgn2_6/prodata/2/pubpaa/PCTUS_PUBCOMB.pep.*
- 7: /cgn2_6/prodata/2/pubpaa/US08_NEW_PUB.pep.*
- 8: /cgn2_6/prodata/2/pubpaa/US08_PUBCOMB.pep.*
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- 10: /cgn2_6/prodata/2/pubpaa/US09B_PUBCOMB.pep.*
- 11: /cgn2_6/prodata/2/pubpaa/US09C_PUBCOMB.pep.*
- 12: /cgn2_6/prodata/2/pubpaa/US09_NEW_PUB.pep.*
- 13: /cgn2_6/prodata/2/pubpaa/US10A_PUBCOMB.pep.*
- 14: /cgn2_6/prodata/2/pubpaa/US10B_PUBCOMB.pep.*
- 15: /cgn2_6/prodata/2/pubpaa/US10C_PUBCOMB.pep.*
- 16: /cgn2_6/prodata/2/pubpaa/US10_NEW_PUB.pep.*
- 17: /cgn2_6/prodata/2/pubpaa/US60_NEW_PUB.pep.*
- 18: /cgn2_6/prodata/2/pubpaa/US60_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	2242	99.8	434	10	US-09-985-689A-1
2	2242	99.8	434	15	US-10-385-662-2
3	2186	97.3	434	10	US-09-985-689A-2
4	2138	95.1	434	10	US-09-985-689A-6
5	2120.5	94.4	433	10	US-09-985-689A-7
6	1993.5	88.7	433	10	US-09-985-689A-5
7	1982.5	88.5	433	10	US-09-985-689A-3
8	1982.5	88.2	433	10	US-09-985-689A-4
9	1581.5	70.4	345	14	US-10-336-324-10
10	1581.5	70.4	345	14	US-10-403-105-13
11	447.5	19.9	659	13	US-10-090-624-12
12	409	18.2	412	13	US-10-090-624-1
13	409	18.2	522	13	US-10-090-624-4
14	409	18.2	654	13	US-10-090-624-16
15	366	16.3	1079	14	US-10-112-488-39

16	363.5	16.2	1208	14	US-10-156-761-13251	Sequence 13251, A
17	348	15.5	1139	14	US-10-156-761-10856	Sequence 10856, A
18	336	15.0	1237	14	US-10-314-657-4	Sequence 4, Appli
19	306.5	13.6	519	15	US-10-084-846A-114	Sequence 114, App
20	306.5	13.6	19725	15	US-10-084-846A-4	Sequence 4, Appli
21	305.5	13.6	1398	13	US-10-090-624-6	Sequence 6, Appli
22	280.5	12.5	595	10	US-09-927-827-59	Sequence 59, Appl
23	278	12.4	580	10	US-09-927-827-55	Sequence 55, Appl
24	276	12.3	418	9	US-09-966-921A-2	Sequence 2, Appli
25	275	12.2	1101	14	US-10-156-761-12934	Sequence 12934, A
26	258	11.5	663	12	US-10-424-599-255271	Sequence 255271, A
27	251	11.2	280	14	US-10-209-813-2	Sequence 2, Appli
28	251	11.2	397	10	US-09-779-334A-5	Sequence 5, Appli
29	247.5	11.0	368	12	US-10-344-231-3	Sequence 3, Appli
30	247	11.0	271	10	US-09-813-408-2	Sequence 2, Appli
31	246.5	11.0	379	10	US-09-813-408-6	Sequence 6, Appli
32	246	10.9	271	14	US-10-242-549-56	Sequence 56, Appli
33	244	10.9	271	14	US-10-242-549-46	Sequence 46, Appli
34	244	10.9	271	14	US-10-242-549-48	Sequence 48, Appli
35	244	10.9	271	14	US-10-242-549-50	Sequence 50, Appli
36	244	10.9	271	14	US-10-242-549-52	Sequence 52, Appli
37	244	10.9	271	14	US-10-242-549-54	Sequence 54, Appli
38	244	10.9	271	14	US-10-242-549-60	Sequence 60, Appli
39	242.5	10.8	627	10	US-09-927-827-60	Sequence 60, Appli
40	242	10.8	271	14	US-10-242-549-44	Sequence 44, Appli
41	242	10.8	271	14	US-10-242-549-58	Sequence 58, Appli
42	240	10.7	269	8	US-08-322-678-10	Sequence 10, Appli
43	240	10.7	269	9	US-09-837-235-16	Sequence 16, Appli
44	240	10.7	269	9	US-09-060-854B-6	Sequence 6, Appli
45	240	10.7	269	9	US-09-975-139-1	Sequence 1, Appli

ALIGNMENTS

RESULT 1
US-09-985-689A-1
Sequence 1, Application US/09985689A
Publication No. US20030022351A1

GENERAL INFORMATION:
APPLICANT: HATADA, YUJI
APPLICANT: OGAWA, AKINORI
APPLICANT: KAGEYAMA, YASUSHI
APPLICANT: SAITO, TSUYOSHI
APPLICANT: ARAKI, HIROYUKI
APPLICANT: SUMITOMO, NOBUYUKI
APPLICANT: OKUDA, MITSUYOSHI
APPLICANT: SAEKI, KATSUHIKA
TITLE OF INVENTION: Alkaline proteases
FILE REFERENCE: 215483US0
CURRENT APPLICATION NUMBER: US/09/985,689A
CURRENT FILING DATE: 2002-07-01
PRIOR APPLICATION NUMBER: JP P2000-355166
PRIOR FILING DATE: 2000-11-22
PRIOR APPLICATION NUMBER: JP P2001-114048
NUMBER OF SEQ ID NOS: 7
SOFTWARE: Patentin version 3.1
SEQ ID NO 1
LENGTH: 434
TYPE: PRT
ORGANISM: Bacillus sp.
US-09-985-689A-1

Query Match 99.8%; Score 2242; DB 10; Length 434;
Best Local Similarity 99.8%; Pred. No. 5.2e-187;
Matches 433; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
QY 1 NDVARGIVKADVAQSSYGLYGGQIVAVADTGLDTRNDSSMHEAFRGKITALVALGRTN 60
Db 1 NDVARGIVKADVAQSSYGLYGGQIVAVADTGLDTRNDSSMHEAFRGKITALVALGRTN 60
QY 61 NANDTNGHGTHTVAGSVLNGSTNGKMAFQANLVFOSIMDSGGGLGLFSLNLTFLFSQAYS 120

Db 61 NNDTNGHGHVAGSVLNGSTNKGMAPOANLVFQIMDSGGGLGGLPSNLQTLFSAQYS 120
 QY 121 AGARIHTNSWGAAVNGAYTTDSRNVDYVRKNDMTILFAAGNEGPNGGTISAPGTAKNAI 180
 Db 121 AGARIHTNSWGAAVNGAYTTDSRNVDYVRKNDMTILFAAGNEGPNGGTISAPGTAKNAI 180
 QY 181 TVGATENLRPSFGSYADNINHVAQFSRGTGKRIKPDVMAFGTIFILSARSSSLAPDSSF 240
 Db 181 TVGATENLRPSFGSYADNINHVAQFSRGTGKRIKPDVMAFGTIFILSARSSSLAPDSSF 240
 QY 241 WANHDSKYAYMGCTSMATPIVAGNVAQLREHFVKNRGITPKPSLLKALIAAGAADIGLGY 300
 Db 241 WANHDSKYAYMGCTSMATPIVAGNVAQLREHFVKNRGITPKPSLLKALIAAGAADIGLGY 300
 QY 301 PNGNOGWRVTLDKSLNVAYNNESSLSSTOKATYSFTATAGKPKISLWMSDAPASTTA 360
 Db 301 PNGNOGWRVTLDKSLNVAYNNESSLSSTOKATYSFTATAGKPKISLWMSDAPASTTA 360
 QY 361 SVTLVNDLNLVITAPNGTQYVGNDFTSYNDNWDGNNVNFVINAPOSQGTYYTIEVQAYN 420
 Db 361 SVTLVNDLNLVITAPNGTQYVGNDFTSYNDNWDGNNVNFVINAPOSQGTYYTIEVQAYN 420
 QY 421 VPVGPQTFSLAIVN 434
 Db 421 VPVGPQTFSLAIVN 434

RESULT 2

US-10-385-662-2
 ; Sequence 2, Application US/10385662
 ; Publication No. US20040002432A1
 ; GENERAL INFORMATION:
 ; APPLICANT: OKUDA, MITSUYOSHI
 ; APPLICANT: SAITO, TSUYOSHI
 ; APPLICANT: SAITO, KAZUHIRO
 ; APPLICANT: SUMITOMO, NOBUYUKI
 ; APPLICANT: IZAWA, YOSHIFUMI
 ; APPLICANT: SAEKI, KATSUHIISA
 ; APPLICANT: KOBAYASHI, TORU
 ; APPLICANT: NOMURA, MASAFUMI
 ; TITLE OF INVENTION: Alkaline protease
 ; FILE REFERENCE: 234938U80
 ; CURRENT APPLICATION NUMBER: US/10/385,662
 ; CURRENT FILING DATE: 2003-03-12
 ; PRIOR APPLICATION NUMBER: JP 2002-081428
 ; PRIOR FILING DATE: 2002-03-22
 ; PRIOR APPLICATION NUMBER: JP 2002-165987
 ; PRIOR FILING DATE: 2002-06-06
 ; PRIOR APPLICATION NUMBER: JP 2002-304230
 ; PRIOR FILING DATE: 2002-10-18
 ; PRIOR APPLICATION NUMBER: JP 2002-304231
 ; PRIOR FILING DATE: 2002-10-18
 ; NUMBER OF SEQ ID NOS: 20
 ; SOFTWARE: Patentin version 3.1
 ; SEQ ID NO 2
 ; LENGTH: 434
 ; TYPE: PRT
 ; ORGANISM: Bacillus sp. KSM-KP43
 US-10-385-662-2

Query Match 99.8%; Score 2242; DB 15; Length 434;
 Best Local Similarity 99.8%; Pred. No. 5.2e-187;
 Matches 433; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
 QY 1 NDVARGIVKADVAQSSYGLYGQGIIVAVADTGLDTRNDSSMHEAFRGKITALVALGRTN 60
 Db 1 NDVARGIVKADVAQSSYGLYGQGIIVAVADTGLDTRNDSSMHEAFRGKITALVALGRTN 60
 QY 61 NNDTNGHGHVAGSVLNGSTNKGMAPOANLVFQIMDSGGGLGGLPSNLQTLFSAQYS 120
 Db 61 NNDTNGHGHVAGSVLNGSTNKGMAPOANLVFQIMDSGGGLGGLPSNLQTLFSAQYS 120

QY 121 AGARIHTNSWGAAVNGAYTTDSRNVDYVRKNDMTILFAAGNEGPNGGTISAPGTAKNAI 180
 Db 121 AGARIHTNSWGAAVNGAYTTDSRNVDYVRKNDMTILFAAGNEGPNGGTISAPGTAKNAI 180
 QY 181 TVGATENLRPSFGSYADNINHVAQFSRGTGKRIKPDVMAFGTIFILSARSSSLAPDSSF 240
 Db 181 TVGATENLRPSFGSYADNINHVAQFSRGTGKRIKPDVMAFGTIFILSARSSSLAPDSSF 240
 QY 241 WANHDSKYAYMGCTSMATPIVAGNVAQLREHFVKNRGITPKPSLLKALIAAGAADIGLGY 300
 Db 241 WANHDSKYAYMGCTSMATPIVAGNVAQLREHFVKNRGITPKPSLLKALIAAGAADIGLGY 300
 QY 301 PNGNOGWRVTLDKSLNVAYNNESSLSSTOKATYSFTATAGKPKISLWMSDAPASTTA 360
 Db 301 PNGNOGWRVTLDKSLNVAYNNESSLSSTOKATYSFTATAGKPKISLWMSDAPASTTA 360
 QY 361 SVTLVNDLNLVITAPNGTQYVGNDFTSYNDNWDGNNVNFVINAPOSQGTYYTIEVQAYN 420
 Db 361 SVTLVNDLNLVITAPNGTQYVGNDFTSYNDNWDGNNVNFVINAPOSQGTYYTIEVQAYN 420
 QY 421 VPVGPQTFSLAIVN 434
 Db 421 VPVGPQTFSLAIVN 434

RESULT 3

US-09-985-689A-2
 ; Sequence 2, Application US/09985689A
 ; Publication No. US20030022351A1
 ; GENERAL INFORMATION:
 ; APPLICANT: HATADA, YUJI
 ; APPLICANT: OGAWA, AKINORI
 ; APPLICANT: KAGEYAMA, YASUSHI
 ; APPLICANT: SATO, TSUYOSHI
 ; APPLICANT: ARAKI, HIROYUKI
 ; APPLICANT: SUMITOMO, NOBUYUKI
 ; APPLICANT: OKUDA, MITSUYOSHI
 ; APPLICANT: SAEKI, KATSUHIISA
 ; TITLE OF INVENTION: Alkaline proteases
 ; FILE REFERENCE: 215483U80
 ; CURRENT APPLICATION NUMBER: US/09/985,689A
 ; CURRENT FILING DATE: 2002-07-01
 ; PRIOR APPLICATION NUMBER: JP P2000-355166
 ; PRIOR FILING DATE: 2000-11-22
 ; PRIOR APPLICATION NUMBER: JP P2001-114048
 ; PRIOR FILING DATE: 2001-04-12
 ; NUMBER OF SEQ ID NOS: 7
 ; SOFTWARE: Patentin version 3.1
 ; SEQ ID NO 2
 ; LENGTH: 434
 ; TYPE: PRT
 ; ORGANISM: Bacillus sp.
 US-09-985-689A-2

Query Match 97.3%; Score 2186; DB 10; Length 434;
 Best Local Similarity 96.3%; Pred. No. 4e-182;
 Matches 418; Conservative 14; Mismatches 2; Indels 0; Gaps 0;
 QY 1 NDVARGIVKADVAQSSYGLYGQGIIVAVADTGLDTRNDSSMHEAFRGKITALVALGRTN 60
 Db 1 NDVARGIVKADVAQSSYGLYGQGIIVAVADTGLDTRNDSSMHEAFRGKITALVALGRTN 60
 QY 61 NNDTNGHGHVAGSVLNGSTNKGMAPOANLVFQIMDSGGGLGGLPSNLQTLFSAQYS 120
 Db 61 NNDTNGHGHVAGSVLNGSTNKGMAPOANLVFQIMDSGGGLGGLPSNLQTLFSAQYS 120
 QY 121 AGARIHTNSWGAAVNGAYTTDSRNVDYVRKNDMTILFAAGNEGPNGGTISAPGTAKNAI 180
 Db 121 AGARIHTNSWGAAVNGAYTTDSRNVDYVRKNDMTILFAAGNEGPNGGTISAPGTAKNAI 180
 QY 181 TVGATENLRPSFGSYADNINHVAQFSRGTGKRIKPDVMAFGTIFILSARSSSLAPDSSF 240
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QY 301 PNGNGQWGRVTLDKSLNVAYNNESSLSTSQKATYSFTATAGKPKLSLWSDAPASTTA 360
Db 301 PNGNGQWGRVTLDKSLNVAYNNESSLSTSQKATYFTATAGKPKLSLWSDAPASTTA 360
QY 361 SVTLVNDLNLVITAPNGTOYVGNDFTSFYNDNWDGNNVNFVFINAPQSGTYTIEVQAYN 420
Db 361 SVTLVNDLNLVITAPNGTRVGNDFTSFYNDNWDGNNVNFVFINAPQSGTYTIEVQAYN 420
QY 421 VPVGPQTFSLAIYN 434
Db 421 VPVGPQTFSLAIYN 434

RESULT 4
US-09-985-689A-6
; Sequence 6, Application US/09985689A
; Publication No. US20030022351A1
; GENERAL INFORMATION:
; APPLICANT: HATADA, YUJI
; APPLICANT: OGAWA, AKINORI
; APPLICANT: KAGEYAMA, YASUSHI
; APPLICANT: SATO, TSUYOSHI
; APPLICANT: ARAKI, HIROYUKI
; APPLICANT: SUMITOMO, NOBUYUKI
; APPLICANT: OKUDA, MITSUYOSHI
; APPLICANT: SAEKI, KATSUHISA
; TITLE OF INVENTION: Alkaline proteases
; FILE REFERENCE: 215483USO
; CURRENT APPLICATION NUMBER: US/09/985,689A
; CURRENT FILING DATE: 2002-07-01
; PRIOR APPLICATION NUMBER: JP P2000-355166
; PRIOR FILING DATE: 2000-11-22
; PRIOR APPLICATION NUMBER: JP P2001-114048
; PRIOR FILING DATE: 2001-04-12
; NUMBER OF SEQ ID NOS: 7
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 6
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Bacillus sp.
US-09-985-689A-6

Query Match 95.1%; Score 2138; DB 10; Length 434;
Best Local Similarity 93.3%; Pred. No. 6.2e-178;
Matches 405; Conservative 20; Mismatches 9; Indels 0; Gaps 0;

QY 1 NDVARGIVKADVAQSSYGLYGQGOIVAVADTGLDTGRNDSMHEAFRGKITALYALGRIN 60
Db 1 NDVARGIVKADVAQSSYGLYGQGOIVAVADTGLDTGRNDSMHEAFRGKITALYALGRIN 60
QY 61 NANDTNGHGTTHVAGSVLNGSTNKGMAPOANLVFQSIMDSGGGLGGLPSNLQTLFSQAYS 120
Db 61 NANDTNGHGTTHVAGSVLNGSTNKGMAPOANLVFQSIMDSGGGLGGLPSNVTLFSQAYS 120
QY 121 AGARIHTNSWGAAYNGAYTTDSRNVDYVRKNDMTILFAAGNEGPNNGGTISAPGTAKNAI 180
Db 121 AGARIHTNSWGAAYNGAYTTDSRNVDYVRKNDMTILFAAGNEGPNNGGTISAPGTAKNAI 180
QY 181 TVGATENLRPSFGSYADNINHAQSFSSRGPTKDGRIKPDVMAPTFTILSARSLAPDSSF 240
Db 181 TVGATENLRPSFGSYADNINHAQSFSSRGPTKDGRIKPDVMAPTFTILSARSLAPDSSF 240
QY 241 WANHDSKYAYMGCTSWATPIVAGNVAQLREHFVKRGITPKPSLLKAALIAGAADIGLY 300
Db 241 WANHDSKYAYMGCTSWATPIVAGNVAQLREHFVKRGITPKPSLLKAALIAGAADIGLY 300
QY 301 PNGNGQWGRVTLDKSLNVAYNNESSLSTSQKATYSFTATAGKPKLSLWSDAPASTTA 360
Db 301 PNGNGQWGRVTLDKSLNVAYNNESSLSTSQKATYSFTATAGKPKLSLWSDAPASTTA 360
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Db 301 PSNGQWGRVTLDKSLNVAFVNETSLSTNQKATYSFTAQSGKPKLSLWSDAPASTSA 360
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Db 361 SVTLVNDLNLVITAPNGTKYVGNDFTPYDNNWDGNNVNFVFINAPQSGTYTIEVQAYN 420
QY 421 VPVGPQTFSLAIYN 434
Db 421 VPQGPQAFSLAIYN 434

RESULT 5
US-09-985-689A-7
; Sequence 7, Application US/09985689A
; Publication No. US20030022351A1
; GENERAL INFORMATION:
; APPLICANT: HATADA, YUJI
; APPLICANT: OGAWA, AKINORI
; APPLICANT: KAGEYAMA, YASUSHI
; APPLICANT: SATO, TSUYOSHI
; APPLICANT: ARAKI, HIROYUKI
; APPLICANT: SUMITOMO, NOBUYUKI
; APPLICANT: OKUDA, MITSUYOSHI
; APPLICANT: SAEKI, KATSUHISA
; TITLE OF INVENTION: Alkaline proteases
; FILE REFERENCE: 215483USO
; CURRENT APPLICATION NUMBER: US/09/985,689A
; CURRENT FILING DATE: 2002-07-01
; PRIOR APPLICATION NUMBER: JP P2000-355166
; PRIOR FILING DATE: 2000-11-22
; PRIOR APPLICATION NUMBER: JP P2001-114048
; PRIOR FILING DATE: 2001-04-12
; NUMBER OF SEQ ID NOS: 7
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 7
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Bacillus sp.
US-09-985-689A-7

Query Match 94.4%; Score 2120.5; DB 10; Length 433;
Best Local Similarity 93.3%; Pred. No. 2.1e-176;
Matches 405; Conservative 20; Mismatches 8; Indels 1; Gaps 1;

QY 1 NDVARGIVKADVAQSSYGLYGQGOIVAVADTGLDTGRNDSMHEAFRGKITALYALGRIN 60
Db 1 NDVARGIVKADVAQNNFGLYGQGOIVAVADTGLDTGRNDSMHEAFRGKITALYALGRIN 60
QY 61 NANDTNGHGTTHVAGSVLNGSTNKGMAPOANLVFQSIMDSGGGLGGLPSNLQTLFSQAYS 120
Db 61 NANDTNGHGTTHVAGSVLNG-ATNKGMAPOANLVFQSIMDSGGGLGGLPANLQTLFSQAYS 119
QY 121 AGARIHTNSWGAAYNGAYTTDSRNVDYVRKNDMTILFAAGNEGPNNGGTISAPGTAKNAI 180
Db 120 AGARIHTNSWGAAYNGAYTTDSRNVDYVRKNDMTILFAAGNEGPGSGTISAPGTAKNAI 179
QY 181 TVGATENLRPSFGSYADNINHAQSFSSRGPTKDGRIKPDVMAPTFTILSARSLAPDSSF 240
Db 180 TVGATENLRPSFGSYADNINHAQSFSSRGPTKDGRIKPDVMAPTFTILSARSLAPDSSF 239
QY 241 WANHDSKYAYMGCTSWATPIVAGNVAQLREHFVKRGITPKPSLLKAALIAGAADIGLY 300
Db 240 WANHDSKYAYMGCTSWATPIVAGNVAQLREHFVKRGITPKPSLLKAALIAGAADVGLGF 299
QY 301 PNGNGQWGRVTLDKSLNVAYNNESSLSTSQKATYSFTATAGKPKLSLWSDAPASTTA 360
Db 300 PNGNGQWGRVTLDKSLNVAFVNETSPLSTSQKATYSFTAQAGKPKLSLWSDAPGSTTA 359
QY 361 SVTLVNDLNLVITAPNGTOYVGNDFTSFYNDNWDGNNVNFVFINAPQSGTYTIEVQAYN 420
Db 360 SVTLVNDLNLVITAPNGTKYVGNDFTPYDNNWDGNNVNFVFINAPQSGTYTIEVQAYN 419
QY 421 VPVGPQTFSLAIYN 434
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Db 420 VPVSPQTFSLAIVH 433

RESULT 6

US-09-985-689A-5

Sequence 5, Application US/09985689A

Publication No. US20030022351A1

GENERAL INFORMATION:

APPLICANT: HATADA, YUJI

APPLICANT: OGAWA, AKINORI

APPLICANT: KAGEYAMA, YASUSHI

APPLICANT: SATO, TSUYOSHI

APPLICANT: ARAKI, HIROYUKI

APPLICANT: SUMITOMO, NOBUYUKI

APPLICANT: OKUDA, MITSUYOSHI

APPLICANT: SAEKI, KATSUHIISA

TITLE OF INVENTION: Alkaline proteases

FILE REFERENCE: 215483USO

CURRENT APPLICATION NUMBER: US/09/985,689A

CURRENT FILING DATE: 2002-07-01

PRIOR APPLICATION NUMBER: JP P2000-355166

PRIOR FILING DATE: 2000-11-22

PRIOR APPLICATION NUMBER: JP P2001-114048

PRIOR FILING DATE: 2001-04-12

NUMBER OF SEQ ID NOS: 7

SOFTWARE: PatentIn version 3.1

SEQ ID NO 3

LENGTH: 433

TYPE: PRT

ORGANISM: Bacillus sp.

US-09-985-689A-3

Query Match 88.5%; Score 1989.5; DB 10; Length 433;

Best Local Similarity 87.3%; Pred. No. 5.7e-165;

Matches 379; Conservative 29; Mismatches 25; Indels 1; Gaps 1;

QY 1 NDVARGIVKADVAQSSYGLYGQGVAVADTGLDTRNDSSMHEAFRGKITALYALGRN 60

Db 1 NDVARGIVKADVAQNNYGLYGQGVAVADTGLDTRNDSSMHEAFRGKITALYALGRN 60

QY 61 NANDTNGHGHVAGSVLNGSTNKGMAPOANLVFQSIMDSGGGLGGLPSNLTLFSQAYS 120

Db 61 NANDPNGHGHVAGSVLGN-ALNKGMAPOANLVFQSIMDSGGGLGGLPSNLTLFSQAWN 119

QY 121 AGARIHTNSWGAAYNGAYTTDSRNVDYVRKNDMTILFAAGNEGPNNGTISAPGTAKNAI 180

Db 120 AGARIHTNSWGAAYNGAYTANSRQVDEYVRNNDMTVLFAAGNEGPNNGTISAPGTAKNAI 179

QY 181 TVGATENLRPSFGSVADNINHVAFSSRGPTKDGRIKPDVMAPGTFILSARSSLAPDSF 240

Db 180 TVGATENYRPSFGSIADNPNHIAQFSSRGATRDGRIKPDVTAPGTFFILSARSSLAPDSF 239

QY 241 WANHDSKYAYMGTSNATPIVAGNVAQLREHFVNRGITPKPSLLKAALIAGAADIGLY 300

Db 240 WANINSKYAYMGTSNATPIVAGNVAQLREHFVNRGITPKPSLLKAALIAGATDVGLGY 299

QY 301 PNGNQGWGRVTLDKSLNVAYNVNESSLSQKATYSFTATAGKPLKISLVMSDAPASTTA 360

Db 300 PSQDQGWGRVTLDKSLNVAYNVNEATALTGQKATYSFTQAGKPLKISLVWTDAPGSTTA 359

QY 361 SVTLVNDLNLVITAPNGTOYVGNDFTPSYNDNWDGNNVNFVINAPOSQGTITIEVQAYN 420

Db 360 SVTLVNDLNLVITAPNGQKIVGNDPFSYDNDNWDGNNVNFVINAPOSQGTITIEVQAYN 419

QY 421 VPVGPQTFSLAIVN 434

Db 420 VPSPQRFSLAIVH 433

RESULT 8

US-09-985-689A-4

Sequence 4, Application US/09985689A

Publication No. US20030022351A1

GENERAL INFORMATION:

APPLICANT: HATADA, YUJI

APPLICANT: OGAWA, AKINORI

APPLICANT: KAGEYAMA, YASUSHI

APPLICANT: SATO, TSUYOSHI

APPLICANT: ARAKI, HIROYUKI

Db 420 VPVSPQTFSLAIVH 433

RESULT 7

US-09-985-689A-3

Sequence 3, Application US/09985689A

Query Match 88.7%; Score 1993.5; DB 10; Length 433;

Best Local Similarity 87.6%; Pred. No. 2.5e-165;

Matches 380; Conservative 29; Mismatches 24; Indels 1; Gaps 1;

QY 1 NDVARGIVKADVAQSSYGLYGQGVAVADTGLDTRNDSSMHEAFRGKITALYALGRN 60

Db 1 NDVARGIVKADVAQNNYGLYGQGVAVADTGLDTRNDSSMHEAFRGKITALYALGRN 60

QY 61 NANDTNGHGHVAGSVLNGSTNKGMAPOANLVFQSIMDSGGGLGGLPSNLTLFSQAYS 120

Db 61 NANDPNGHGHVAGSVLGN-ALNKGMAPOANLVFQSIMDSGGGLGGLPSNLTLFSQAWN 119

QY 121 AGARIHTNSWGAAYNGAYTTDSRNVDYVRKNDMTILFAAGNEGPNNGTISAPGTAKNAI 180

Db 120 AGARIHTNSWGAAYNGAYTANSRQVDEYVRNNDMTVLFAAGNEGPNNGTISAPGTAKNAI 179

QY 181 TVGATENLRPSFGSVADNINHVAFSSRGPTKDGRIKPDVMAPGTFILSARSSLAPDSF 240

Db 180 TVGATENYRPSFGSLADNPNHIAQFSSRGATRDGRIKPDVTAPGTFFILSARSSLAPDSF 239

QY 241 WANHDSKYAYMGTSNATPIVAGNVAQLREHFVNRGITPKPSLLKAALIAGAADIGLY 300

Db 240 WANINSKYAYMGTSNATPIVAGNVAQLREHFVNRGITPKPSLLKAALIAGATDVGLGY 299

QY 301 PNGNQGWGRVTLDKSLNVAYNVNESSLSQKATYSFTATAGKPLKISLVMSDAPASTTA 360

Db 300 PSQDQGWGRVTLDKSLNVAYNVNEATALTGQKATYSFQAQKPLKISLVWTDAPGSTTA 359

QY 361 SVTLVNDLNLVITAPNGTOYVGNDFTPSYNDNWDGNNVNFVINAPOSQGTITIEVQAYN 420

Db 360 SVTLVNDLNLVITAPNGQKIVGNDPFSYDNDNWDGNNVNFVINAPOSQGTITIEVQAYN 419

QY 421 VPVGPQTFSLAIVN 434

Db 420 VPSPQRFSLAIVH 433

```
; APPLICANT: SUMITOMO, NOBUYUKI
; APPLICANT: OKUDA, MITSUYOSHI
; APPLICANT: SAEKI, KATSUHIISA
; TITLE OF INVENTION: Alkaline proteases
; FILE REFERENCE: 215483USO
; CURRENT FILING DATE: 2002-07-01
; PRIOR APPLICATION NUMBER: US/09/985,689A
; PRIOR FILING DATE: 2000-11-22
; PRIOR FILING DATE: 2000-11-22
; PRIOR APPLICATION NUMBER: JP P2001-114048
; PRIOR FILING DATE: 2001-04-12
; NUMBER OF SEQ ID NOS: 7
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 4
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Bacillus sp.
US-09-985-689A-4

Query Match      88.2%; Score 1982.5; DB 10; Length 433;
Best Local Similarity 87.1%; Pred. No. 2.3e-164;
Matches 378; Conservative 30; Mismatches 25; Indels 1; Gaps 1;

QY 1 NDVARGIVKADVAQSSYGLYGQGVAVADTGLDGRNDSMHEAFRGKITALYALGRTN 60
Db 1 NDVARGIVKADVAQNNYGLYGQGVAVADTGLDGRNDSMHEAFRGKITALYALGRTN 60
QY 61 NANTNGHGTHTVAGSVLGNSTNKGMAPOANLVFQSIMDSGGGLGGLPSNLQTLPSQAYS 120
Db 61 NASDPNGHGTHTVAGSVLGN-ALNKGMAPOANLVFQSIMDSGGGLGGLPSNLQTLPSQAWN 119
QY 121 AGARIHTNSGAAVNGAYTTDSRNVDYVRKNDMTILFAAGNEGPGGTTISAPGTAKNAI 180
Db 120 AGARIHTNSGAPVNGAYTANSRQVDEYVRNNDMTILFAAGNEGPGTTISAPGTAKNAI 179
QY 181 TVGATENLRPSFGSYADNINHVAFSSRGPTKGRKPDVMAFGTIFLSARSSLPDSSF 240
Db 180 TVGATENYRPSFGSIADNPNHIAQSSRGATRDGRIKPDVTAAGPTIFLSARSSLPDSSF 239
QY 241 WANHDSKYAYMGTSMTATPIVAGNVAQLREHFVKNGRITPKPSLLKAALIAAGADIGLY 300
Db 240 WANYNSKYAYMGTSMTATPIVAGNVAQLREHFVKNGRITPKPSLLKAALIAAGADVGLGY 299
QY 301 PNGNQGWGRVTLDKSLNVAIVNNESSLSQTSKATYSFTATAGKPLKISLVMSDAPASTA 360
Db 300 PNGDQGWGRVTLKSLNVAIVNEATATGKATYSFOAGKPLKISLVMTDAPGSTTA 359
QY 361 SYTLVNDLNLVITAPNGTOYVGNDFTSFYNDNWDGRNNVNFVINAPOSQTYTIEVQAYN 420
Db 360 SYTLVNDLNLVITAPNGQIVGNDFSYFYNDNWDGRNNVNFVINAPOSQTYTIEVQAYN 419
QY 421 VPVGQPTFSLAIVN 434
Db 420 VPSPQGRFSLAIVH 433

RESULT 9
US-10-336-324-10
; Sequence 10, Application US/10336324
; Publication No. US20030176304A1
; GENERAL INFORMATION:
; APPLICANT: Hansen, Peter
; APPLICANT: Bauditz, Peter
; APPLICANT: Mikkelsen, Frank
; TITLE OF INVENTION: Protease Variants and Compositions
; FILE REFERENCE: 5349.204-US
; CURRENT APPLICATION NUMBER: US/10/336,324
; CURRENT FILING DATE: 2003-01-03
; PRIOR APPLICATION NUMBER: US/09/512,251A
; PRIOR FILING DATE: 2000-02-24
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn version 3.1
```

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; SEQ ID NO 10
; LENGTH: 345
; TYPE: PRT
; ORGANISM: Bacillus
US-10-336-324-10

Query Match      70.4%; Score 1581.5; DB 14; Length 345;
Best Local Similarity 95.3%; Pred. No. 1.7e-129;
Matches 303; Conservative 10; Mismatches 4; Indels 1; Gaps 1;

QY 1 NDVARGIVKADVAQSSYGLYGQGVAVADTGLDGRNDSMHEAFRGKITALYALGRTN 60
Db 29 NDVARGIVKADVAQNNYGLYGQGVAVADTGLDGRNDSMHEAFRGKITALYALGRTN 88
QY 61 NANTNGHGTHTVAGSVLGNSTNKGMAPOANLVFQSIMDSGGGLGGLPSNLQTLPSQAYS 120
Db 89 NANDPNGHGTHTVAGSVLGN-ATNKGMAPOANLVFQSIMDSGGGLGGLPANLQTLPSQAYS 147
QY 121 AGARIHTNSGAAVNGAYTTDSRNVDYVRKNDMTILFAAGNEGPGGTTISAPGTAKNAI 180
Db 148 AGARIHTNSGAPVNGAYTTDSRNVDYVRKNDMTILFAAGNEGPGGTTISAPGTAKNAI 207
QY 181 TVGATENLRPSFGSYADNINHVAFSSRGPTKGRKPDVMAFGTIFLSARSSLPDSSF 240
Db 208 TVGATENLRPSFGSYADNINHVAFSSRGPTDRGRIKPDVMAFGTIFLSARSSLPDSSF 267
QY 241 WANHDSKYAYMGTSMTATPIVAGNVAQLREHFVKNGRITPKPSLLKAALIAAGADIGLY 300
Db 268 WANHDSKYAYMGTSMTATPIVAGNVAQLREHFVKNGRITPKPSLLKAALIAAGADVGLGF 327
QY 301 PNGNQGWGRVTLDKSLNV 318
Db 328 PNGNQGWGRVTLDKSLNV 345

RESULT 10
US-10-403-105-13
; Sequence 13, Application US/10403105
; Publication No. US20030180933A1
; GENERAL INFORMATION:
; APPLICANT: Hansen, Peter K.
; APPLICANT: Mikkelsen, Frank
; TITLE OF INVENTION: Protease Variants And Compositions
; FILE REFERENCE: 5435.200-US
; CURRENT APPLICATION NUMBER: US/10/403,105
; CURRENT FILING DATE: 2003-03-31
; PRIOR APPLICATION NUMBER: US/09/196,281A
; PRIOR FILING DATE: 1998-11-19
; PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 1332/97
; PRIOR FILING DATE: EARLIER FILING DATE: 1997-11-21
; NUMBER OF SEQ ID NOS: 18
; SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 13
; LENGTH: 345
; TYPE: PRT
; ORGANISM: Bacillus
US-10-403-105-13

Query Match      70.4%; Score 1581.5; DB 14; Length 345;
Best Local Similarity 95.3%; Pred. No. 1.7e-129;
Matches 303; Conservative 10; Mismatches 4; Indels 1; Gaps 1;

QY 1 NDVARGIVKADVAQSSYGLYGQGVAVADTGLDGRNDSMHEAFRGKITALYALGRTN 60
Db 29 NDVARGIVKADVAQNNYGLYGQGVAVADTGLDGRNDSMHEAFRGKITALYALGRTN 88
QY 61 NANTNGHGTHTVAGSVLGNSTNKGMAPOANLVFQSIMDSGGGLGGLPSNLQTLPSQAYS 120
Db 89 NANDPNGHGTHTVAGSVLGN-ATNKGMAPOANLVFQSIMDSGGGLGGLPANLQTLPSQAYS 147
QY 121 AGARIHTNSGAAVNGAYTTDSRNVDYVRKNDMTILFAAGNEGPGGTTISAPGTAKNAI 180
```

Db 148 AGARIHNSWGAPVNGAYTTDSRNVDDYVRKNDMTILFAAGNEGPGSGTTISARPTAKNAI 207
Qy 181 TVGATENLRPSFGSYADNINHAQFSSRGPTKGRIKPDVMAPOFTILSARSLAPDSSF 240
Db 208 TVGATENLRPSFGSYADNINHAQFSSRGPTKGRIKPDVMAPOFTILSARSLAPDSSF 267
Qy 241 WANHDSKYAYNGGTSMATPIVAGNVAQLREHFVKNRGITPKPSLLKAALTAGADTGLGY 300
Db 268 WANHDSKYAYNGGTSMATPIVAGNVAQLREHFVKNRGITPKPSLLKAALTAGADVGLGF 327
Qy 301 PNGNQGWGRVTLDSKLVN 318
Db 328 PNGNQGWGRVTLDSKLVN 345

RESULT 11
US-10-090-624-12
; Sequence 12, Application US/10090624
; Publication No. US20020132335A1
; GENERAL INFORMATION:
; APPLICANT: TAKAKURA, Hikaru
; APPLICANT: MORISHITA, Mio
; APPLICANT: SHIMOJO, Tomoko
; APPLICANT: ASADA, Kiyozo
; APPLICANT: KATO, Ikunoshin
; TITLE OF INVENTION: SYSTEM FOR EXPRESSING HYPERTHERMOSTABLE
; FILE REFERENCE: TAKAKURA=6
; CURRENT FILING DATE: 2002-03-06
; PRIOR APPLICATION NUMBER: 09/445,472
; PRIOR FILING DATE: 1999-12-06
; PRIOR APPLICATION NUMBER: 151969/1997
; PRIOR FILING DATE: 1997-06-10
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 12
; LENGTH: 659
; TYPE: PRT
; ORGANISM: Thermococcus celer
US-10-090-624-12

Query Match 19.9%; Score 447.5; DB 13; Length 659;
Best Local Similarity 29.8%; Pred. No. 4e-30;
Matches 137; Conservative 68; Mismatches 153; Indels 101; Gaps 18;

Qy 8 VKADVAQSSYGLYGQGIIVAVADTGLDTRNDSSMHEAFRGIITALY-ALGRTNANDTN 66
Db 145 IGADTVNNSLGYDGGVVVAIVDTGIDAN-----HPDLKGVIGWYDAVNGRSTPYDDQ 198
Qy 67 GHGTHVAGSVLNGSTN---GMAPOANLVFQSIM--DSGGGLGLPSNLQTLFSQAYSA 121
Db 199 GHGTHVAGSVLNGSTN---GMAPOANLVFQSIM--DSGGGLGLPSNLQTLFSQAYSA 121
Qy 122 GARI-----HTNSGAAVNGAYTTDSRNVDDYVRKNDMTILFAAGNEGPGSGTT 169
Db 259 GIRVINLSGSSQSSDGTSLSCAVNNAWDA-----GIVCVAAAGNSGPNYTT 306
Qy 170 ISAPGTAKNAITVGAATENLRPSFGSYADNINHAQFSSRGPTKGRIKPDVMAPOFTILS 229
Db 307 VGSPPAAASKVITVGA-----VDSNNDIASFSSRGPTADGRLPKEVVAQGVVDLIA 355
Qy 230 ARSSLAPDSFWANHDSKYAYNGGTSMATPIVAG-NVAQLREHFVKNRGITPK--PSLLK 286
Db 356 PRAS---GTSMTGPIINDYTTKASGTSMATPHVSGVGAALILQAH-----PSWTFDKVK 404
Qy 287 ALIAGA-----ADIGLGPNGNQGWGRVTLDSKSL---NVAYNVSSLSLTSQKATY 335
Db 405 TALIEADIVAPKEADIAIYGA-----GRVNYKAIKYDDYAKLITFTGSVADKGSATH 457
Qy 336 SFTATAGKPLKSLVMSDAPASTTASVTLVNDLNLVITAPNGTQYVGNDFTSYNDNDWDG 395
Db 458 TFDVSGATFTATLYWD-----TGSSDIDLVLDPNGNE-VDSYSYTAY-----G 500

Qy 396 RNVENVFINAPQSGTYTIEVQAYNVVPVGPOTFSLAVN 434
Db 501 --GFEKVGYNPTAGTWTVKVSYK---GAANYQDVVVS 534

RESULT 12
US-10-090-624-1
; Sequence 1, Application US/10090624
; Publication No. US20020132335A1
; GENERAL INFORMATION:
; APPLICANT: TAKAKURA, Hikaru
; APPLICANT: MORISHITA, Mio
; APPLICANT: SHIMOJO, Tomoko
; APPLICANT: ASADA, Kiyozo
; APPLICANT: KATO, Ikunoshin
; TITLE OF INVENTION: SYSTEM FOR EXPRESSING HYPERTHERMOSTABLE
; FILE REFERENCE: TAKAKURA=6
; CURRENT FILING DATE: 2002-03-06
; PRIOR APPLICATION NUMBER: 09/445,472
; PRIOR FILING DATE: 1999-12-06
; PRIOR APPLICATION NUMBER: 151969/1997
; PRIOR FILING DATE: 1997-06-10
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 1
; LENGTH: 412
; TYPE: PRT
; ORGANISM: Pyrococcus furiosus
US-10-090-624-1

Query Match 18.2%; Score 409; DB 13; Length 412;
Best Local Similarity 29.6%; Pred. No. 4.6e-27;
Matches 135; Conservative 60; Mismatches 147; Indels 114; Gaps 19;

Qy 18 GLVGQGIIVAVADTGLDTRNDSSMHEAFRGIITALYALGRTNAN-----DTNGHGTH 71
Db 22 GYDGGITIGIITGID-----ASHPDLQGV-----IGWVDFVNGRSYPYDDHGHGTH 70
Qy 72 VAGSVLNGSTN---KMAPOANLVFQSIM--DSGGGLGLPSNLQTLFSQAYSAGARI 125
Db 71 VASIAAGTGAASNGKYKGNAPAGKLAGIKVLGADGSGSISTIIKGVWAVNKKYGIKV 130
Qy 126 HTNSGAA-----AVNGAYTTDSRNVDDYVRKNDMTILFAAGNEGPGSGTTISAP 173
Db 131 INLSGSSQSSDGTSLSCAVNNAWDA-----GLVVVVAAGNSGENKTYTIGSP 178
Qy 174 GTAKNAITVGAATENLRPSFGSYADNINHAQFSSRGPTKGRIKPDVMAPOFTILSARSS 233
Db 179 AAASKVITVGA-----VDKYDVITSSFSRGPTADGRLPKEVVAQGVNIIAARAS 227
Qy 234 LAPDSSFWANHDSKYAYNGGTSMATPIVAGNVAQLREHFVKNRGITPK--PSLLKAALIA 291
Db 228 ---GTSMGQPIINDYTTAAPTSMATPHVAGIAALLQ-----AHPSTWPKVKXTALIE 277
Qy 292 GA-----ADIGLGPNGNQGWGRVTLDSKSLNVAYNVSSLSLTSQKA-----TYSPT 338
Db 278 TADIVKPDDEADIAIYGA-----GRVNYKAIN--YDNYAKLVFTGYVANKGSOHQFV 328
Qy 339 ATAGKPLKSLVMSDAPASTTASVTLVNDLNLVITAPNGTQYVGNDFTSYNDNDWDGRNN 398
Db 329 ISGASFTVATLYWDNAN-----SOLDILVLDPNGNQ-VDSYSYTAY-----G 369
Qy 399 VENVFINAPQSGTYTIEVQAYNVVPVGPOTFSLAVN 434
Db 370 FEKVGYNPDTGTTIKVVSYS---GSANYQDVVVS 402

RESULT 13
US-10-090-624-4
; Sequence 4, Application US/10090624
; Publication No. US20020132335A1
; GENERAL INFORMATION:

APPLICANT: TAKAKURA, Hikaru
APPLICANT: MORISHITA, Mio
APPLICANT: SHIMOJO, Tomoko
APPLICANT: ASADA, Kiyozo
APPLICANT: KATO, Ikunoshin
TITLE OF INVENTION: SYSTEM FOR EXPRESSING HYPERTHERMOSTABLE
FILE REFERENCE: TAKAKURA=6
CURRENT APPLICATION NUMBER: US/10/090,624
CURRENT FILING DATE: 2002-03-06
PRIOR APPLICATION NUMBER: 09/445,472
PRIOR FILING DATE: 1999-12-06
PRIOR APPLICATION NUMBER: 151969/1997
PRIOR FILING DATE: 1997-06-10
NUMBER OF SEQ ID NOS: 33
SOFTWARE: PatentIn version 3.0
SEQ ID NO 4
LENGTH: 522
TYPE: PRT
ORGANISM: Pyrococcus furiosus
FEATURE:
NAME/KEY: misc feature
LOCATION: (428)..(428)
OTHER INFORMATION: Xaa at position 428 is Gly or Val.
US-10-090-624-4

Query Match 18.2%; Score 409; DB 13; Length 522;
Best Local Similarity 29.6%; Pred. No. 6.6e-27;
Matches 135; Conservative 60; Mismatches 147; Indels 114; Gaps 19;
Qy 18 GLYGQGIIVAVADTGLDTRNDSSMHEAPRGKITALYALGRNTNAN-----DTNGHGH 71
Db 22 GYDGSGITIGIDTGID-----ASHPDLOGKV-----IGWVDFVNGRSYPYDDHGHGH 70
Qy 72 VAGSVLNGSTN-----KGMAPQANLVFQSIM--DSGGGLGGLPSNLQTLFSAQYSAGARI 125
Db 71 VASIAAGTGAASNGKYKGMAPGAKLAGIKVLGADGSGSISTTIKGVEMAVDNKDKYGIKV 130
Qy 126 HTNSWGA-----AVNGAYTTDSRVDVYRKNDMTILFAAGNEGNGGTISAP 173
Db 131 INSLGSSQSDGTDALSQAANAADA-----GLVVVAAGNSGPNKYTIQSP 178
Qy 174 GTAKNAITVGTENLRPSFGSYADNINHVAQFSSRGPTKDGRIKPDVMAFGTIFLSARSS 233
Db 179 AAASKVITVGA-----VDKYDVTITFSRSGPTADGRLKPEVAVPAGNWIIAARAS 227
Qy 234 LAPDSSFANHDSKYAYMGTSMTATPIVAGNVAQLREHFVKNRGITPK--PSLLKAALIA 291
Db 228 ---GTSMGQPINDDYTAAPGTSMTATPHVAGIAALLQ-----AHPSTWTPDKVKTALIE 277
Qy 292 GA-----ADTGLGYPNGNGQGRVTLDKSLNVAYNVNESSLSQKA-----TYSFT 338
Db 278 TADIVKPEDEADIA YGA-----GRVNAVYKAIN--YDNYAKLVFTGYVANKGSQTHQFV 328
Qy 339 ATAGKPLKISLWSDAPASTASVTLVNDLNLVITAPNGTQVYVNDNFTSPYNDNWDGRNN 398
Db 329 ISGASFVTATLYNDNAN-----SDDLILYDPNGNQ--VDYSYTAY-----G 369
Qy 399 VENVFNAPOSGTYTIEVOAYNVVPGPQTFSLAIVN 434
Db 370 FERVGYNPDTGTWTKVVSYS---GSANYQVDVVS 402

RESULT 14
US-10-090-624-16
Sequence 16, Application US/10090624
Publication No. US20020132335A1
GENERAL INFORMATION:
APPLICANT: TAKAKURA, Hikaru
APPLICANT: MORISHITA, Mio
APPLICANT: SHIMOJO, Tomoko
APPLICANT: ASADA, Kiyozo
APPLICANT: KATO, Ikunoshin
TITLE OF INVENTION: SYSTEM FOR EXPRESSING HYPERTHERMOSTABLE

FILE REFERENCE: TAKAKURA=6
CURRENT APPLICATION NUMBER: US/10/090,624
CURRENT FILING DATE: 2002-03-06
PRIOR APPLICATION NUMBER: 09/445,472
PRIOR FILING DATE: 1999-12-06
PRIOR APPLICATION NUMBER: 151969/1997
PRIOR FILING DATE: 1997-06-10
NUMBER OF SEQ ID NOS: 33
SOFTWARE: PatentIn version 3.0
SEQ ID NO 16
LENGTH: 654
TYPE: PRT
ORGANISM: Pyrococcus furiosus
US-10-090-624-16
Query Match 18.2%; Score 409; DB 13; Length 654;
Best Local Similarity 29.6%; Pred. No. 9.1e-27;
Matches 135; Conservative 60; Mismatches 147; Indels 114; Gaps 19;
Qy 18 GLYGQGIIVAVADTGLDTRNDSSMHEAPRGKITALYALGRNTNAN-----DTNGHGH 71
Db 154 GYDGSGITIGIDTGID-----ASHPDLOGKV-----IGWVDFVNGRSYPYDDHGHGH 202
Qy 72 VAGSVLNGSTN-----KGMAPQANLVFQSIM--DSGGGLGGLPSNLQTLFSAQYSAGARI 125
Db 203 VASIAAGTGAASNGKYKGMAPGAKLAGIKVLGADGSGSISTTIKGVEMAVDNKDKYGIKV 262
Qy 126 HTNSWGA-----AVNGAYTTDSRVDVYRKNDMTILFAAGNEGNGGTISAP 173
Db 263 INSLGSSQSDGTDALSQAANAADA-----GLVVVAAGNSGPNKYTIQSP 310
Qy 174 GTAKNAITVGTENLRPSFGSYADNINHVAQFSSRGPTKDGRIKPDVMAFGTIFLSARSS 233
Db 311 AAASKVITVGA-----VDKYDVTITFSRSGPTADGRLKPEVAVPAGNWIIAARAS 359
Qy 234 LAPDSSFANHDSKYAYMGTSMTATPIVAGNVAQLREHFVKNRGITPK--PSLLKAALIA 291
Db 360 ---GTSMGQPINDDYTAAPGTSMTATPHVAGIAALLQ-----AHPSTWTPDKVKTALIE 409
Qy 292 GA-----ADTGLGYPNGNGQGRVTLDKSLNVAYNVNESSLSQKA-----TYSFT 338
Db 410 TADIVKPEDEADIA YGA-----GRVNAVYKAIN--YDNYAKLVFTGYVANKGSQTHQFV 460
Qy 339 ATAGKPLKISLWSDAPASTASVTLVNDLNLVITAPNGTQVYVNDNFTSPYNDNWDGRNN 398
Db 461 ISGASFVTATLYNDNAN-----SDDLILYDPNGNQ--VDYSYTAY-----G 501
Qy 399 VENVFNAPOSGTYTIEVOAYNVVPGPQTFSLAIVN 434
Db 502 FERVGYNPDTGTWTKVVSYS---GSANYQVDVVS 534
RESULT 15
US-10-112-488-39
Sequence 39, Application US/10112488
Publication No. US20030082746A1
GENERAL INFORMATION:
APPLICANT: KIKUCHI, Yoshiaki
APPLICANT: DATE, Masayo
APPLICANT: UMEZAWA, Yukiko
APPLICANT: YOKOYAMA, Keiichi
APPLICANT: MATSUI, Hiroshi
TITLE OF INVENTION: PROCESS FOR PRODUCING TRANSLUTAMINASE
FILE REFERENCE: 219286USOCNT
CURRENT APPLICATION NUMBER: US/10/112,488
CURRENT FILING DATE: 2002-04-01
PRIOR APPLICATION NUMBER: PCT/JP00/06780
PRIOR FILING DATE: 2000-09-29
PRIOR APPLICATION NUMBER: JP2000-280098
PRIOR FILING DATE: 2000-06-28
PRIOR APPLICATION NUMBER: JP11-280098
PRIOR FILING DATE: 1999-09-30
NUMBER OF SEQ ID NOS: 70

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; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 39
; LENGTH: 1079
; TYPE: PRT
; ORGANISM: Streptomyces albobogriseolus
US-10-112-488-39

Query Match      16.3% Score 366; DB 14; Length 1079;
Best Local Similarity 21.6%; Pred No. 1.1e-22;
Matches 148; Conservative 55; Mismatches 175; Indels 90; Gaps 20;

QY 3 VAR---GIVKADVAQS-----SYGLYQGGIIVAVADTGLDTRNDSSMHEAFRG 48
Db 160 VARWLDGVRKASLDTSVGQIGTPKAWEGYDGKGVKIAVLDTGVD-----ATHPDLKG 213
QY 49 KITALYALGRNTNANDINGHGTGVAGSVLNGS-----TNKGMAPOANLVFQSIMDSGGEL 104
Db 214 QVTASKNFTSAPTTGDDVVGGHGVHVASIAAGTGAKSQKTYKGVAPGAKILINGKVLDDAG-- 271
QY 105 GGLPSNLQTLFSCAYSAGARIHTNSMGAAYNGAYTTDSRNVDYVRK--NDMTILF--AA 160
Db 272 FGDDSGILAGMWAQAQADIVNMSLG-----GMDTPETDELEAAVDKLSAEKGILFAIAA 327
QY 161 GNEGPNCGTISAPGTAKNAITVGATENLRPSFGSYADNINNHVAFQSSRGP-TKDGRIKPD 219
Db 328 GNEGFPQ--SIGSPGSADSALTVGA-----VDDKDKLADFSTGPRLGDGAVKPD 374
QY 220 VMAPGTFILSARSSLAPDSSFWANHDSKYAYMGGTSMATPIVAGNVQAQLREHFVKRGIT 279
Db 375 LTAFGVDITAAAKGNIDIAKEVGKPKAGYMTISGTSMATPHVAGAAALLKQHPH----- 429
QY 280 PKPSLLKALLAGAADICLG-YPNGNQGWGRVTLDKSLNVAYVNESSIS----- 328
Db 430 WKYAEKLGALTASTKD---GKYTFEQGSGRVQVDKAITQTVAEPVSLSPGVQQWPHAD 486
QY 329 ---TSOKATYSFTATAGKPLKISLWSD-----APAS--TTASVTLVNDLNLVITAP-NG 377
Db 487 DKPVTKKLTYNLGTEDVTLKLTSTATCPKGAAPAGFFILGASTL-----TVPANG 538
QY 378 TQYVGNDFTSYNDNWDGRNNVNFVINAPOS-----GTYTEVOAYNV 421
Db 539 TASVDVTADTRLGGAVDGTYSAYVYVATGAGQSVRTAAAVEREVESYNV 586
```

Search completed: March 18, 2004, 04:12:40
Job time : 47 secs

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OM protein - protein search, using sw model

Run on: March 18, 2004, 04:07:52 ; Search time 46 Seconds
(without alignments)
2443.187 Million cell updates/sec

Title: US-09-985-689A-1-COPY

Perfect score: 2247
Sequence: 1 NDVARGIVKADVAQSSYGLY.....EVQAYNPVGPQTFLAIVN 434

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1049977 seqs, 258955339 residues

Total number of hits satisfying chosen parameters: 1049977

Minimum DB seq length: 0
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published Applications AA:

- 1: /cgn2_6/prodata/2/pubpaa/US07_PUBCOMB.pep.*
- 2: /cgn2_6/prodata/2/pubpaa/PCT_NEW_PUB.pep.*
- 3: /cgn2_6/prodata/2/pubpaa/US06_NEW_PUB.pep.*
- 4: /cgn2_6/prodata/2/pubpaa/US06_PUBCOMB.pep.*
- 5: /cgn2_6/prodata/2/pubpaa/US07_NEW_PUB.pep.*
- 6: /cgn2_6/prodata/2/pubpaa/PCTUS_PUBCOMB.pep.*
- 7: /cgn2_6/prodata/2/pubpaa/US08_NEW_PUB.pep.*
- 8: /cgn2_6/prodata/2/pubpaa/US08_PUBCOMB.pep.*
- 9: /cgn2_6/prodata/2/pubpaa/US09A_PUBCOMB.pep.*
- 10: /cgn2_6/prodata/2/pubpaa/US09B_PUBCOMB.pep.*
- 11: /cgn2_6/prodata/2/pubpaa/US09C_PUBCOMB.pep.*
- 12: /cgn2_6/prodata/2/pubpaa/US09_NEW_PUB.pep.*
- 13: /cgn2_6/prodata/2/pubpaa/US10A_PUBCOMB.pep.*
- 14: /cgn2_6/prodata/2/pubpaa/US10B_PUBCOMB.pep.*
- 15: /cgn2_6/prodata/2/pubpaa/US10C_PUBCOMB.pep.*
- 16: /cgn2_6/prodata/2/pubpaa/US10_NEW_PUB.pep.*
- 17: /cgn2_6/prodata/2/pubpaa/US60_NEW_PUB.pep.*
- 18: /cgn2_6/prodata/2/pubpaa/US60_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Query Match	Score	Length	DB ID	Description
1	2242	99.8	434	10	US-09-985-689A-1
2	2242	99.8	434	15	US-10-385-662-2
3	2186	97.3	434	10	US-09-985-689A-2
4	2138	95.1	434	10	US-09-985-689A-6
5	2120.5	94.4	433	10	US-09-985-689A-7
6	1993.5	88.7	433	10	US-09-985-689A-5
7	1989.5	88.2	433	10	US-09-985-689A-3
8	1982.5	88.2	433	10	US-09-985-689A-4
9	1581.5	70.4	345	14	US-10-336-324-10
10	1581.5	70.4	345	14	US-10-403-105-13
11	447.5	19.9	659	13	US-10-090-624-12
12	409	18.2	412	13	US-10-090-624-1
13	409	18.2	522	13	US-10-090-624-4
14	409	18.2	654	13	US-10-090-624-16
15	366	16.3	1079	14	US-10-112-488-39

16	363.5	16.2	1208	14	US-10-156-761-13251	Sequence 13251, A
17	348	15.5	1139	14	US-10-156-761-10856	Sequence 10856, A
18	336	15.0	1237	14	US-10-314-657-4	Sequence 4, Appli
19	306.5	13.6	519	15	US-10-084-846A-114	Sequence 114, App
20	306.5	13.6	19725	15	US-10-084-846A-4	Sequence 4, Appli
21	305.5	13.6	1398	13	US-10-090-624-6	Sequence 6, Appli
22	280.5	12.5	595	10	US-09-927-827-59	Sequence 59, Appli
23	278	12.4	580	10	US-09-927-827-55	Sequence 55, Appli
24	276	12.3	418	9	US-09-966-921A-2	Sequence 2, Appli
25	275	12.2	1101	14	US-10-156-761-12934	Sequence 12934, A
26	258	11.5	663	12	US-10-424-599-255271	Sequence 255271, A
27	251	11.2	280	14	US-10-209-812-2	Sequence 5, Appli
28	251	11.2	397	10	US-09-779-334A-5	Sequence 3, Appli
29	247.5	11.0	368	12	US-10-344-231-3	Sequence 2, Appli
30	247	11.0	271	10	US-09-813-408-2	Sequence 6, Appli
31	246.5	11.0	379	10	US-09-813-408-6	Sequence 56, Appli
32	246	10.9	271	14	US-10-242-549-56	Sequence 46, Appli
33	244	10.9	271	14	US-10-242-549-46	Sequence 48, Appli
34	244	10.9	271	14	US-10-242-549-48	Sequence 50, Appli
35	244	10.9	271	14	US-10-242-549-50	Sequence 52, Appli
36	244	10.9	271	14	US-10-242-549-52	Sequence 54, Appli
37	244	10.9	271	14	US-10-242-549-54	Sequence 60, Appli
38	244	10.9	271	14	US-10-242-549-60	Sequence 60, Appli
39	242.5	10.8	627	10	US-09-927-827-60	Sequence 44, Appli
40	242	10.8	271	14	US-10-242-549-44	Sequence 48, Appli
41	242	10.8	271	14	US-10-242-549-58	Sequence 58, Appli
42	240	10.7	269	8	US-08-322-678-10	Sequence 10, Appli
43	240	10.7	269	9	US-09-837-235-16	Sequence 16, Appli
44	240	10.7	269	9	US-09-060-854B-6	Sequence 6, Appli
45	240	10.7	269	9	US-09-975-139-1	Sequence 1, Appli

ALIGNMENTS

RESULT 1
US-09-985-689A-1

Sequence 1, Application US/09985689A
Publication No. US20030022351A1
GENERAL INFORMATION:
APPLICANT: HATADA, YUJI
APPLICANT: OGAWA, AKINORI
APPLICANT: KAGEYAMA, YASUSHI
APPLICANT: SATO, TSUYOSHI
APPLICANT: ARAKI, HIROYUKI
APPLICANT: SUMITOMO, NOBUYUKI
APPLICANT: OKUDA, MITSUYOSHI
APPLICANT: SAEKI, KATSUHIISA
TITLE OF INVENTION: Alkaline proteases
FILE REFERENCE: 215483USO
CURRENT APPLICATION NUMBER: US/09/985.689A
CURRENT FILING DATE: 2002-07-01
PRIOR APPLICATION NUMBER: JP P2000-355166
PRIOR FILING DATE: 2000-11-22
PRIOR APPLICATION NUMBER: JP P2001-114048
PRIOR FILING DATE: 2001-04-12
NUMBER OF SEQ ID NOS: 7
SOFTWARE: Patentin version 3.1
SEQ ID NO 1
LENGTH: 434
TYPE: PRT
ORGANISM: Bacillus sp.
US-09-985-689A-1

Query Match	99.8%	Score 2242;	DB 10;	Length 434;
Best Local Similarity	99.8%	Pred. No. 5.2e-187;		
Matches 433;	Conservative 1;	Mismatches 0;	Indels 0;	Gaps 0;
QY	1	NDVARGIVKADVAQSSYGLYGGQIVAVADTGLTGRNDSMHEAFRGKITALVALGRTN	60	
DB	1	NDVARGIVKADVAQSSYGLYGGQIVAVADTGLTGRNDSMHEAFRGKITALVALGRTN	60	
QY	61	NANDTNGHGTGVAGSVLGNSTNKGMAPQANLVFQSIMDSGGJGGILPSNLQTLFQSAYS	120	

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Db      61  NNDTNGHGTGTVAGSVLGNSTNKGMAPQANLVFQSIMDSGGGLGGLPSNLQTLFSQAYS 120
QY      121 AGARIHTNSWGAAVNGAYTTDSRNVDVYRKNDMTILFAAGNEGPNNGGTISAPGTAKNAI 180
Db      121 AGARIHTNSWGAAVNGAYTTDSRNVDVYRKNDMTILFAAGNEGPNNGGTISAPGTAKNAI 180
QY      181 TVGATENLRPSFGSVADNINHVAFSSRGPTKDGRIKPDVMAFGTIFILSARSSSLAPDSSF 240
Db      181 TVGATENLRPSFGSVADNINHVAFSSRGPTKDGRIKPDVMAFGTIFILSARSSSLAPDSSF 240
QY      241 WANHSKAYMCGTSMATPIVAGNVAQLREHFVKRGITPKPSLLKAALIAAGADIGLY 300
Db      241 WANHSKAYMCGTSMATPIVAGNVAQLREHFVKRGITPKPSLLKAALIAAGADIGLY 300
QY      301 PNGNQGWGRVTLDKSLNVAYNNESSLSSTQKATYSFTATAGKPLKISLVWSDAPASTTA 360
Db      301 PNGNQGWGRVTLDKSLNVAYNNESSLSSTQKATYSFTATAGKPLKISLVWSDAPASTTA 360
QY      361 SVTLVNDLNLVITAPNGTQYVGNDFTPSYNDWDRNNVNFVINAPOSQGTITIEVQAYN 420
Db      361 SVTLVNDLNLVITAPNGTQYVGNDFTPSYNDWDRNNVNFVINAPOSQGTITIEVQAYN 420
QY      421 VPVGPQTFSLAIVN 434
Db      421 VPVGPQTFSLAIVN 434

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RESULT 2

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US-10-385-662-2
; Sequence 2, Application US/10385662
; Publication No. US20040002432A1
; GENERAL INFORMATION:
; APPLICANT: OKUDA, MITSUYOSHI
; APPLICANT: SATO, TSUYOSHI
; APPLICANT: SAITO, KAZUHIRO
; APPLICANT: SUMITOMO, NOBUYUKI
; APPLICANT: IZAWA, YOSHIFUMI
; APPLICANT: SAEKI, KATSUHIISA
; APPLICANT: KOBAYASHI, TOHRU
; APPLICANT: NOMURA, MASAFUMI
; TITLE OF INVENTION: Alkaline protease
; FILE REFERENCE: 234938U50
; CURRENT APPLICATION NUMBER: US/10/385,662
; PRIOR FILING DATE: 2003-03-12
; PRIOR FILING DATE: 2003-03-12
; PRIOR FILING DATE: 2002-08-1428
; PRIOR FILING DATE: 2002-03-22
; PRIOR FILING DATE: 2002-06-06
; PRIOR FILING DATE: 2002-304230
; PRIOR FILING DATE: 2002-10-18
; PRIOR FILING DATE: 2002-304231
; PRIOR FILING DATE: 2002-10-18
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 2
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Bacillus sp. KSM-KP43
US-10-385-662-2

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Query Match      99.8%; Score 2242; DB 15; Length 434;
Best Local Similarity 99.8%; Pred. No. 5.2e-187;
Matches 433; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY      1  NDVARGIVKADVAQSSYGLYGQGIIVAVADTGLDGTGRNDSMHEAFRGKITALYALGRTN 60
Db      1  NDVARGIVKADVAQSSYGLYGQGIIVAVADTGLDGTGRNDSMHEAFRGKITALYALGRTN 60
QY      61  NNDTNGHGTGTVAGSVLGNSTNKGMAPQANLVFQSIMDSGGGLGGLPSNLQTLFSQAYS 120
Db      61  NNDTNGHGTGTVAGSVLGNSTNKGMAPQANLVFQSIMDSGGGLGGLPSNLQTLFSQAYS 120

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QY      121 AGARIHTNSWGAAVNGAYTTDSRNVDVYRKNDMTILFAAGNEGPNNGGTISAPGTAKNAI 180
Db      121 AGARIHTNSWGAAVNGAYTTDSRNVDVYRKNDMTILFAAGNEGPNNGGTISAPGTAKNAI 180
QY      181 TVGATENLRPSFGSVADNINHVAFSSRGPTKDGRIKPDVMAFGTIFILSARSSSLAPDSSF 240
Db      181 TVGATENLRPSFGSVADNINHVAFSSRGPTKDGRIKPDVMAFGTIFILSARSSSLAPDSSF 240
QY      241 WANHSKAYMCGTSMATPIVAGNVAQLREHFVKRGITPKPSLLKAALIAAGADIGLY 300
Db      241 WANHSKAYMCGTSMATPIVAGNVAQLREHFVKRGITPKPSLLKAALIAAGADIGLY 300
QY      301 PNGNQGWGRVTLDKSLNVAYNNESSLSSTQKATYSFTATAGKPLKISLVWSDAPASTTA 360
Db      301 PNGNQGWGRVTLDKSLNVAYNNESSLSSTQKATYSFTATAGKPLKISLVWSDAPASTTA 360
QY      361 SVTLVNDLNLVITAPNGTQYVGNDFTPSYNDWDRNNVNFVINAPOSQGTITIEVQAYN 420
Db      361 SVTLVNDLNLVITAPNGTQYVGNDFTPSYNDWDRNNVNFVINAPOSQGTITIEVQAYN 420
QY      421 VPVGPQTFSLAIVN 434
Db      421 VPVGPQTFSLAIVN 434

```

RESULT 3

```

US-09-985-689A-2
; Sequence 2, Application US/09985689A
; Publication No. US20030022351A1
; GENERAL INFORMATION:
; APPLICANT: HATADA, YUJI
; APPLICANT: OGAWA, AKINORI
; APPLICANT: KAGEYAMA, YASUSHI
; APPLICANT: SATO, TSUYOSHI
; APPLICANT: ARAKI, HIROYUKI
; APPLICANT: SUMITOMO, NOBUYUKI
; APPLICANT: OKADA, MITSUYOSHI
; APPLICANT: SAEKI, KATSUHIISA
; TITLE OF INVENTION: Alkaline proteases
; FILE REFERENCE: 215483U50
; CURRENT APPLICATION NUMBER: US/09/985,689A
; CURRENT FILING DATE: 2002-07-01
; PRIOR APPLICATION NUMBER: JP P2000-355166
; PRIOR FILING DATE: 2000-11-22
; PRIOR APPLICATION NUMBER: JP P2001-114048
; PRIOR FILING DATE: 2001-04-12
; NUMBER OF SEQ ID NOS: 7
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 2
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Bacillus sp.
US-09-985-689A-2

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Query Match      97.3%; Score 2186; DB 10; Length 434;
Best Local Similarity 96.3%; Pred. No. 4e-182;
Matches 418; Conservative 14; Mismatches 2; Indels 0; Gaps 0;

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QY      1  NDVARGIVKADVAQSSYGLYGQGIIVAVADTGLDGTGRNDSMHEAFRGKITALYALGRTN 60
Db      1  NDVARGIVKADVAQSSYGLYGQGIIVAVADTGLDGTGRNDSMHEAFRGKITALYALGRTN 60
QY      61  NNDTNGHGTGTVAGSVLGNSTNKGMAPQANLVFQSIMDSGGGLGGLPSNLQTLFSQAYS 120
Db      61  NNDTNGHGTGTVAGSVLGNSTNKGMAPQANLVFQSIMDSGGGLGGLPSNLQTLFSQAYS 120
QY      121 AGARIHTNSWGAAVNGAYTTDSRNVDVYRKNDMTILFAAGNEGPNNGGTISAPGTAKNAI 180
Db      121 AGARIHTNSWGAAVNGAYTTDSRNVDVYRKNDMTILFAAGNEGPNNGGTISAPGTAKNAI 180
QY      181 TVGATENLRPSFGSVADNINHVAFSSRGPTKDGRIKPDVMAFGTIFILSARSSSLAPDSSF 240
Db      181 TVGATENLRPSFGSVADNINHVAFSSRGPTKDGRIKPDVMAFGTIFILSARSSSLAPDSSF 240

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QY 241 WANHDSKYAYMGTSWATPIVAGNVAQLREHFVKNGRITPKPSLLKAALIAGAADIGLY 300
DB 241 WANHDSKYAYMGTSWATPIVAGNVAQLREHFVKNGRITPKPSLLKAALIAGAADIGLY 300
QY 301 PNGNQGWGRVTLDKSLNVAYNSSSLTSQKATYSFTATAGKPLKISLWSDAPASTTA 360
DB 301 PNGNQGWGRVTLDKSLNVAYNSSSLTSQKATYSFTATAGKPLKISLWSDAPASTTA 360
QY 361 SVTLVNDLNLVITAPNGTQVGNDFTPYNDNWDGNNVNFVFINAPQSGTYTIEVQAYN 420
DB 361 SVTLVNDLNLVITAPNGTQVGNDFTPYNDNWDGNNVNFVFINAPQSGTYTIEVQAYN 420
QY 421 VPVGQPTFSLAINV 434
DB 421 VPVGQPTFSLAINV 434

RESULT 4

US-09-985-689A-6

; Sequence 6, Application US/09985689A

; Publication No. US20030022351A1

; GENERAL INFORMATION:

; APPLICANT: HATADA, YUJI

; APPLICANT: OGAWA, AKINORI

; APPLICANT: KAGEYAMA, YASUSHI

; APPLICANT: SATO, TSUYOSHI

; APPLICANT: ARAKI, HIROYUKI

; APPLICANT: SUMITOMO, NOBUYUKI

; APPLICANT: OKUDA, MITSUYOSHI

; APPLICANT: SAEKI, KATSUISHA

; TITLE OF INVENTION: Alkaline proteases

; FILE REFERENCE: 215483US0

; CURRENT APPLICATION NUMBER: US/09/985,689A

; CURRENT FILING DATE: 2002-07-01

; PRIOR APPLICATION NUMBER: JP P2000-355166

; PRIOR FILING DATE: 2000-11-22

; PRIOR APPLICATION NUMBER: JP P2001-114048

; PRIOR FILING DATE: 2001-04-12

; NUMBER OF SEQ ID NOS: 7

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 6

; LENGTH: 434

; TYPE: PRT

; ORGANISM: Bacillus sp.

US-09-985-689A-6

Query Match 95.1%; Score 2138; DB 10; Length 434;
Best Local Similarity 93.3%; Pred. No. 6.2e-178;
Matches 405; Conservative 20; Mismatches 9; Indels 0; Gaps 0;

QY 1 NDVARGIVKADVAQSSYGLYGQOQIVAVADTGLDGTGRNDSMHEAFRGKITAIYALGRIN 60
DB 1 NDVARGIVKADVAQSSYGLYGQOQIVAVADTGLDGTGRNDSMHEAFRGKITAIYALGRIN 60
QY 61 NANDTNGHGHVAGSVLNGSTNKGMAPOANLVFQSIMDSGGGLGGLPSNLQTLFSQAYS 120
DB 61 NANDPNGHGHVAGSVLNGSTNKGMAPOANLVFQSIMDSGGGLGGLPSNLQTLFSQAYS 120
QY 121 AGARIHTNSWGAAYNGAYTTDSRNVDYVRKNDMTILFAAGNEGPNNGTISAPGTAKNAI 180
DB 121 AGARIHTNSWGAAYNGAYTTDSRNVDYVRKNDMTILFAAGNEGPNNGTISAPGTAKNAI 180
QY 181 TVGATENLRPSFGSYADNINHVAQFSRSGPTKDGRIKPDVMAFGPTILSARSLAPDSGF 240
DB 181 TVGATENLRPSFGSYADNINHVAQFSRSGPTKDGRIKPDVMAFGPTILSARSLAPDSGF 240
QY 241 WANHDSKYAYMGTSWATPIVAGNVAQLREHFVKNGRITPKPSLLKAALIAGAADIGLY 300
DB 241 WANHDSKYAYMGTSWATPIVAGNVAQLREHFVKNGRITPKPSLLKAALIAGAADIGLY 300
QY 301 PNGNQGWGRVTLDKSLNVAYNSSSLTSQKATYSFTATAGKPLKISLWSDAPASTTA 360
DB 301 PNGNQGWGRVTLDKSLNVAYNSSSLTSQKATYSFTATAGKPLKISLWSDAPASTTA 360

DB 301 PSNGQGWGRVTLDKSLNVAFVNVTSSLTSTNQKATYSFTAQSGKPLKISLWSDAPASTTA 360
QY 361 SVTLVNDLNLVITAPNGTQVGNDFTPYNDNWDGNNVNFVFINAPQSGTYTIEVQAYN 420
DB 361 SVTLVNDLNLVITAPNGTQVGNDFTPYNDNWDGNNVNFVFINAPQSGTYTIEVQAYN 420
QY 421 VPVGQPTFSLAINV 434
DB 421 VPVGQPTFSLAINV 434

RESULT 5

US-09-985-689A-7

; Sequence 7, Application US/09985689A

; Publication No. US20030022351A1

; GENERAL INFORMATION:

; APPLICANT: HATADA, YUJI

; APPLICANT: OGAWA, AKINORI

; APPLICANT: KAGEYAMA, YASUSHI

; APPLICANT: SATO, TSUYOSHI

; APPLICANT: ARAKI, HIROYUKI

; APPLICANT: SUMITOMO, NOBUYUKI

; APPLICANT: OKUDA, MITSUYOSHI

; APPLICANT: SAEKI, KATSUISHA

; TITLE OF INVENTION: Alkaline proteases

; FILE REFERENCE: 215483US0

; CURRENT APPLICATION NUMBER: US/09/985,689A

; CURRENT FILING DATE: 2002-07-01

; PRIOR APPLICATION NUMBER: JP P2000-355166

; PRIOR FILING DATE: 2000-11-22

; PRIOR APPLICATION NUMBER: JP P2001-114048

; PRIOR FILING DATE: 2001-04-12

; NUMBER OF SEQ ID NOS: 7

; SOFTWARE: PatentIn version 3.1

; SEQ ID NO 7

; LENGTH: 433

; TYPE: PRT

; ORGANISM: Bacillus sp.

US-09-985-689A-7

Query Match 94.4%; Score 2120.5; DB 10; Length 433;
Best Local Similarity 93.3%; Pred. No. 2.1e-176;
Matches 405; Conservative 20; Mismatches 8; Indels 1; Gaps 1;

QY 1 NDVARGIVKADVAQSSYGLYGQOQIVAVADTGLDGTGRNDSMHEAFRGKITAIYALGRIN 60
DB 1 NDVARGIVKADVAQSSYGLYGQOQIVAVADTGLDGTGRNDSMHEAFRGKITAIYALGRIN 60
QY 61 NANDTNGHGHVAGSVLNGSTNKGMAPOANLVFQSIMDSGGGLGGLPSNLQTLFSQAYS 120
DB 61 NANDPNGHGHVAGSVLNGSTNKGMAPOANLVFQSIMDSGGGLGGLPSNLQTLFSQAYS 119
QY 121 AGARIHTNSWGAAYNGAYTTDSRNVDYVRKNDMTILFAAGNEGPNNGTISAPGTAKNAI 180
DB 121 AGARIHTNSWGAAYNGAYTTDSRNVDYVRKNDMTILFAAGNEGPNNGTISAPGTAKNAI 179
QY 181 TVGATENLRPSFGSYADNINHVAQFSRSGPTKDGRIKPDVMAFGPTILSARSLAPDSGF 240
DB 181 TVGATENLRPSFGSYADNINHVAQFSRSGPTKDGRIKPDVMAFGPTILSARSLAPDSGF 239
QY 241 WANHDSKYAYMGTSWATPIVAGNVAQLREHFVKNGRITPKPSLLKAALIAGAADIGLY 300
DB 241 WANHDSKYAYMGTSWATPIVAGNVAQLREHFVKNGRITPKPSLLKAALIAGAADIGLY 299
QY 301 PNGNQGWGRVTLDKSLNVAYNSSSLTSQKATYSFTATAGKPLKISLWSDAPASTTA 360
DB 301 PNGNQGWGRVTLDKSLNVAFVNVTSSLTSTNQKATYSFTAQSGKPLKISLWSDAPASTTA 359
QY 361 SVTLVNDLNLVITAPNGTQVGNDFTPYNDNWDGNNVNFVFINAPQSGTYTIEVQAYN 420
DB 361 SVTLVNDLNLVITAPNGTQVGNDFTPYNDNWDGNNVNFVFINAPQSGTYTIEVQAYN 419
QY 421 VPVGQPTFSLAINV 434


```

; APPLICANT: SUMITOMO, NOBUYUKI
; APPLICANT: OKUDA, MITSUYOSHI
; APPLICANT: SAEKI, KATSUHIISA
; TITLE OF INVENTION: Alkaline proteases
; FILE REFERENCE: 215483U00
; CURRENT APPLICATION NUMBER: US/09/985,689A
; PRIOR FILING DATE: 2002-07-01
; PRIOR APPLICATION NUMBER: JP P2000-355166
; PRIOR FILING DATE: 2000-11-22
; PRIOR APPLICATION NUMBER: JP P2001-114048
; PRIOR FILING DATE: 2001-04-12
; NUMBER OF SEQ ID NOS: 7
; SOFTWARE: Patent in version 3.1
; SEQ ID NO 4
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Bacillus sp.
US-09-985-689A-4

Query Match      88.2%; Score 1982.5; DB 10; Length 433;
Best Local Similarity 87.1%; Pred. No. 2.3e-164;
Matches 378; Conservative 30; Mismatches 25; Indels 1; Gaps 1;

QY 1 NDVARGIVKADVAQSSYGLYGQGVAVADTGLDGRNDSMHEAFRGKITALYALGRTN 60
Db 1 NDVARGIVKADVAQNNYGLYGQGVAVADTGLDGRNDSMHEAFRGKITALYALGRTN 60
QY 61 NADNTNGHGHVAGSVLNGSTNKGWAPQANLVFQSIMDSGGGLGGLPSNLTLPQAYS 120
Db 61 NADPNHGHTHVAGSVLGN-ALNKGWAPQANLVFQSIMDSGGGLGGLPSNLTLPQAWN 119
QY 121 AGARIHTNSGAAVNGAYTTDSRNVDYVRKNDMTILFAAGNEGPNGGTISAPGTAKNAI 180
Db 120 AGARIHTNSGAPVNGAYTANSQVYVRNNDMTILFAAGNEGPNGGTISAPGTAKNAI 179
QY 181 TVGATENLRPSFGSYADNINHVAFSSRGPTKDGRIKPDVWAPGTFILSASSLAPDSSF 240
Db 180 TVGATENYRPSFGSIADNPHIAQFSRGATRGRIKPDVWAPGTFILSASSLAPDSSF 239
QY 241 WANHDSKYAYMGTSWATPIVAGNVAQLREHFVKNRGIPTKPSLLKAALIAGADIGLGY 300
Db 240 WANYNSKYAYMGTSWATPIVAGNVAQLREHFVKNRGIPTKPSLLKAALIAGADIGLGY 299
QY 301 PNGNQGWGRVTLDKSLNVAVNVSLSSTQKATYSFTATACKPLKISLVWSDAPASTTA 360
Db 300 PNGQGWGRVTLNKSUNVAVNVEATATGQKATYSFQQAQKPLKISLVWTDAPGSTTA 359
QY 361 SVTLVNDLNLVITAPNGTQTVGNDFTSFYNDNWDGNNVNFYFNAPOSQTYTIEVQAYN 420
Db 360 SYTLVNDLNLVITAPNGQKYVGNDFSPYDNNWDGNNVNFYFNAPOSQTYTIEVQAYN 419
QY 421 VPVGPOTFSLAIVN 434
Db 420 VPSGPQRFSALIVH 433

RESULT 9
US-10-336-324-10
; Sequence 10, Application US/10336324
; Publication No. US20030176304A1
; GENERAL INFORMATION:
; APPLICANT: Hansen, Peter
; APPLICANT: Bauditz, Peter
; APPLICANT: Mikkelsen, Frank
; TITLE OF INVENTION: Protease Variants and Compositions
; FILE REFERENCE: 5349.204-US
; CURRENT APPLICATION NUMBER: US/09/512,251A
; PRIOR FILING DATE: 2003-01-03
; PRIOR APPLICATION NUMBER: US/09/512,251A
; PRIOR FILING DATE: 2000-02-24
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: Patent in version 3.1

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; SEQ ID NO 10
; LENGTH: 345
; TYPE: PRT
; ORGANISM: Bacillus
US-10-336-324-10

Query Match      70.4%; Score 1581.5; DB 14; Length 345;
Best Local Similarity 95.3%; Pred. No. 1.7e-129;
Matches 303; Conservative 10; Mismatches 4; Indels 1; Gaps 1;

QY 1 NDVARGIVKADVAQSSYGLYGQGVAVADTGLDGRNDSMHEAFRGKITALYALGRTN 60
Db 29 NDVARGIVKADVAQNFGLYGQGVAVADTGLDGRNDSMHEAFRGKITALYALGRTN 88
QY 61 NADNTNGHGHVAGSVLNGSTNKGWAPQANLVFQSIMDSGGGLGGLPSNLTLPQAYS 120
Db 89 NADPNHGHTHVAGSVLGN-ATNKGWAPQANLVFQSIMDSGGGLGGLPSNLTLPQAYS 147
QY 121 AGARIHTNSGAAVNGAYTTDSRNVDYVRKNDMTILFAAGNEGPNGGTISAPGTAKNAI 180
Db 148 AGARIHTNSGAPVNGAYTTDSRNVDYVRKNDMTILFAAGNEGPNGGTISAPGTAKNAI 207
QY 181 TVGATENLRPSFGSYADNINHVAFSSRGPTKDGRIKPDVWAPGTFILSASSLAPDSSF 240
Db 208 TVGATENLRPSFGSYADNINHVAFSSRGPTKDGRIKPDVWAPGTFILSASSLAPDSSF 267
QY 241 WANHDSKYAYMGTSWATPIVAGNVAQLREHFVKNRGIPTKPSLLKAALIAGADIGLGY 300
Db 268 WANHDSKYAYMGTSWATPIVAGNVAQLREHFVKNRGIPTKPSLLKAALIAGADIGLGY 327
QY 301 PNGNQGWGRVTLDKSLNV 318
Db 328 PNGNQGWGRVTLDKSLNV 345

RESULT 10
US-10-403-105-13
; Sequence 13, Application US/10403105
; Publication No. US20030180933A1
; GENERAL INFORMATION:
; APPLICANT: Hansen, Peter K.
; APPLICANT: Bauditz, Peter
; APPLICANT: Mikkelsen, Frank
; TITLE OF INVENTION: Protease Variants and Compositions
; FILE REFERENCE: 5435.200-US
; CURRENT APPLICATION NUMBER: US/10/403,105
; PRIOR FILING DATE: 2003-03-31
; PRIOR APPLICATION NUMBER: US/09/196,281A
; PRIOR FILING DATE: 1998-11-19
; PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 1332/97
; PRIOR FILING DATE: EARLIER FILING DATE: 1997-11-21
; NUMBER OF SEQ ID NOS: 18
; SOFTWARE: FastSeq for Windows Version 3.0
; SEQ ID NO 13
; LENGTH: 345
; TYPE: PRT
; ORGANISM: Bacillus
US-10-403-105-13

Query Match      70.4%; Score 1581.5; DB 14; Length 345;
Best Local Similarity 95.3%; Pred. No. 1.7e-129;
Matches 303; Conservative 10; Mismatches 4; Indels 1; Gaps 1;

QY 1 NDVARGIVKADVAQSSYGLYGQGVAVADTGLDGRNDSMHEAFRGKITALYALGRTN 60
Db 29 NDVARGIVKADVAQNFGLYGQGVAVADTGLDGRNDSMHEAFRGKITALYALGRTN 88
QY 61 NADNTNGHGHVAGSVLNGSTNKGWAPQANLVFQSIMDSGGGLGGLPSNLTLPQAYS 120
Db 89 NADPNHGHTHVAGSVLGN-ATNKGWAPQANLVFQSIMDSGGGLGGLPSNLTLPQAYS 147
QY 121 AGARIHTNSGAAVNGAYTTDSRNVDYVRKNDMTILFAAGNEGPNGGTISAPGTAKNAI 180

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Db 148 AGARIHTNSGAPVNGAYTTDSRVDDYVRKNDMTILFAAGNEGPGSGTISAFGTAKNAI 207
Qy 181 TVGATENLRSPFSYADNINHVAQFSRGTGDKRIKPDVMAPTGILSARSLAPDSSF 240
Db 208 TVGATENLRSPFSYADNINHVAQFSRGTGDKRIKPDVMAPTGILSARSLAPDSSF 267
Qy 241 WANHDSKYAYMGTSMTATPIVAGNVAQLRHFVKNRGITPKPSLLKAALIAAGADIGLY 300
Db 268 WANHDSKYAYMGTSMTATPIVAGNVAQLRHFVKNRGITPKPSLLKAALIAAGADVGLGF 327
Qy 301 PNGNQGWGRVTLDKSLNV 318
Db 328 PNGNQGWGRVTLDKSLNV 345

RESULT 11
US-10-090-624-12
; Sequence 12, Application US/10090624
; Publication No. US20020132335A1
; GENERAL INFORMATION:
; APPLICANT: TAKAKURA, Hikaru
; APPLICANT: MORISHITA, Mio
; APPLICANT: SHIMOJO, Tomoko
; APPLICANT: ASADA, Kiyozo
; APPLICANT: KATO, Ikunoshin
; TITLE OF INVENTION: SYSTEM FOR EXPRESSING HYPERTHERMOSTABLE
; FILE REFERENCE: TAKAKURA-6
; CURRENT APPLICATION NUMBER: US/10/090,624
; PRIOR FILING DATE: 2002-03-06
; PRIOR APPLICATION NUMBER: 09/445,472
; PRIOR FILING DATE: 1999-12-06
; PRIOR APPLICATION NUMBER: 151969/1997
; PRIOR FILING DATE: 1997-06-10
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Patent in version 3.0
; SEQ ID NO 12
; LENGTH: 659
; TYPE: PRT
; ORGANISM: Thermococcus celer
US-10-090-624-12

Query Match 19.9%; Score 447.5; DB 13; Length 659;
Best Local Similarity 29.8%; Pred. No. 4e-30;
Matches 137; Conservative 68; Mismatches 153; Indels 101; Gaps 18;

Qy 8 KVADVAOSSYGLYGOGQIVAVADTGLDTRNDSSMHEAFRGKITALLY-ALGRNTNANDTN 66
Db 145 IGATVNSLGYDGSVVVAIVDTGIDAN-----HPDLKGVIGWDVANGRSSTPDDQ 198
Qy 67 GHGTHVAGSVLNGSTNK---GMAPQANLVFQSIM--DSGGGLGLPSNLQTLFSQAYS 121
Db 199 GHGTHVAGIVAGTGSVNSQYIGVAPGAKLVGVKVLGADGSGSVSTIIAGVDVWVQNKDY 258
Qy 122 GARI-----HTNSGAAVNGAYTTDSRVDDYVRKNDMTILFAAGNEGNGGT 169
Db 259 GIRVINSLSGSSQSDGTDLSQAVNNAWDA-----GIVVCAAGSGPNTYT 306
Qy 170 ISAPOTAKNAITVGATENLRSPFSYADNINHVAQFSRGTGDKRIKPDVMAPTGILS 229
Db 307 VGSPAAASKVITVGA-----VDSNDNIASFSSRGPTADGRLKPEVAPGVVDIIA 355
Qy 230 ARSLAPDSSFANHDSKYAYMGTSMTATPIVAG-NVAQLRHFVKNRGITPK--PSLLK 286
Db 356 PRAS---GTSMGTPINDYITKASGTSMATPHVSGVGLIIOAH-----PSWTPDKVK 404
Qy 287 AALIAGA-----ADTGLGYPNGQGWGRVTLDKSL---NVAYVNESSLSSTSKATY 335
Db 405 TALIEADIVAPKEIADIAVGA-----GRVNVYKAIKYDDYAKLFTGTSVADKGSATH 457
Qy 336 SFTATAGPLKISLWSDAPASTTASVTLVNDLNLVITAPNGTQYVGNDFTPSPYNDNWDG 395
Db 458 TFDVSGATFVTATLYWD-----TGSDBDILLYDPNGNE-VDYSYTAYI----- 500

Qy 396 RNNVENVFINAPOSQGYTIEVOAYNVFVPGPTFSLAIVN 434
Db 501 --GFEKVGYYNPTAGTWTVKVSYK---GAANYQVDVVS 534

RESULT 12
US-10-090-624-1
; Sequence 1, Application US/10090624
; Publication No. US20020132335A1
; GENERAL INFORMATION:
; APPLICANT: TAKAKURA, Hikaru
; APPLICANT: MORISHITA, Mio
; APPLICANT: SHIMOJO, Tomoko
; APPLICANT: ASADA, Kiyozo
; APPLICANT: KATO, Ikunoshin
; TITLE OF INVENTION: SYSTEM FOR EXPRESSING HYPERTHERMOSTABLE
; FILE REFERENCE: TAKAKURA-6
; CURRENT APPLICATION NUMBER: US/10/090,624
; PRIOR FILING DATE: 2002-03-06
; PRIOR APPLICATION NUMBER: 09/445,472
; PRIOR FILING DATE: 1999-12-06
; PRIOR APPLICATION NUMBER: 151969/1997
; PRIOR FILING DATE: 1997-06-10
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Patent in version 3.0
; SEQ ID NO 1
; LENGTH: 412
; TYPE: PRT
; ORGANISM: Pyrococcus furiosus
US-10-090-624-1

Query Match 18.2%; Score 409; DB 13; Length 412;
Best Local Similarity 29.6%; Pred. No. 4.6e-27;
Matches 135; Conservative 60; Mismatches 147; Indels 114; Gaps 19;

Qy 18 GLYGQGIIVAVADTGLDTRNDSSMHEAFRGKITALLYALGHTNNAN-----DTNGHGH 71
Db 22 GYDGGITIGITIDTGD-----ASHPLDQKV-----IGWDFVNGRSYPYDDHGHGH 70
Qy 72 VAGSVLNGSTN---KGMAPQANLVFQSIM--DSGGGLGLPSNLQTLFSQAYSAGARI 125
Db 71 VASIAAGTGAASNGKYKGMAPGAKLAGIKVLGADGSGSISITIKGVWAVDNKDKYGIK 130
Qy 126 HTNSWGA-----AVNGAYTTDSRVDDYVRKNDMTILFAAGNEGPGTISAP 173
Db 131 INLSLGSQSSDGTDLASQAVNNAWDA-----GLVVVVAAGNSGPNKYITGSP 178
Qy 174 GTAKNAITVGATENLRSPFSYADNINHVAQFSRGTGDKRIKPDVMAPTGILSARSS 233
Db 179 AAASKVITVGA-----VDKYDVTFSRSGPTADGRLKPEVAPGVNIIAARAS 227
Qy 234 LAPDSSFANHDSKYAYMGTSMTATPIVAGNVAQLRHFVKNRGITPK--PSLLKAALIA 291
Db 228 ---GTSMGQPINDDYTAAPGTSMATPHVAGIAALLQ-----AHPSTDPKVKTALIE 277
Qy 292 GA-----ADIGLGYPNGQGWGRVTLDKSLNVAYVNESSLSSTSKA-----TYSFT 338
Db 278 TADIKPEIADIAVGA-----GRVNAVYKAIN--YDNYAKLVFTGVVANKGSGTHQFV 328
Qy 339 ATAGPLKISLWSDAPASTTASVTLVNDLNLVITAPNGTQYVGNDFTPSPYNDNWDGNN 398
Db 329 ISGASFVTATLYWDNAN-----SDLDLILYDPNGNQ-VDYSYTAYI-----G 369
Qy 399 VENNVFINAPOSQGYTIEVOAYNVFVPGPTFSLAIVN 434
Db 370 FEKVGYYNPTDGTWTIKVVSYS---GSANYQVDVVS 402

RESULT 13
US-10-090-624-4
; Sequence 4, Application US/10090624
; Publication No. US20020132335A1
; GENERAL INFORMATION:

; APPLICANT: TAKAKURA, Hikaru
; APPLICANT: MORISHITA, Mio
; APPLICANT: SHIMOJO, Tomoko
; APPLICANT: ASADA, Kiyozo
; APPLICANT: KATO, Ikunoshin
; TITLE OF INVENTION: SYSTEM FOR EXPRESSING HYPERTHERMOSTABLE
; FILE REFERENCE: TAKAKURA=6
; CURRENT APPLICATION NUMBER: US/10/090,624
; CURRENT FILING DATE: 2002-03-06
; PRIOR APPLICATION NUMBER: 09/445,472
; PRIOR FILING DATE: 1999-12-06
; PRIOR APPLICATION NUMBER: 151969/1997
; PRIOR FILING DATE: 1997-06-10
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 4
; LENGTH: 522
; TYPE: PRT
; ORGANISM: Pyrococcus furiosus
; NAME/KEY: misc feature
; LOCATION: (428)..(428)
; OTHER INFORMATION: Xaa at position 428 is Gly or Val.
US-10-090-624-4

Query Match 18.2%; Score 409; DB 13; Length 522;
Best Local Similarity 29.6%; Pred. No. 6.6e-27;
Matches 135; Conservative 60; Mismatches 147; Indels 114; Gaps 19;
QY 18 GLYGGQIVAVADTGLDTRNDSSMHEAFRGKITALYALGRNTNAN-----DTNGHGTH 71
Db 22 GYDGGITIGIITGID-----ASHPDLOGKV-----LGWDFVNGRSYPYDDHGHTH 70
QY 72 VAGSVLNGSTN-----KGMAPONLVFQSIM--DSGGGLGGLPSNLQTLFSQAYSAGARI 125
Db 71 VASIAAGTGAASNGKYKGMAPGAKLAGIKVLGADGGSGISTIIGVEMAVDNKDKYGIKV 130
QY 126 HTNSWGA-----AVNGAYTTDSRNVDDYVRKNDMTILFAAGNEGNGGTISAP 173
Db 131 INLSGSSQSSDGTALDQAVNAWDA-----GLVVVAAGNSGPNKTYIGSP 178
QY 174 GTAKNAITVGATENLRPSFGSYADNINHVAQFSRRGPTKDGRIKPDVMAPTFILSARSS 233
Db 179 AAASKVITVGA-----VDKYDVITTSFSSRGPTADGRLKPEVAVPAGNWIIAARAS 227
QY 234 LAPDSSFANHDSKYAYMGGTSMATPIVAGNVAQLREHFVKRGITPK--PSLLKAALIA 291
Db 228 ---GTSMGQIPINDYTAAPGTSMAITHVAGIAALLQ-----AHPSWTPDKVKTALIE 277
QY 292 GA-----ADIGLGPNGNCGWRVTLDKSLNVAIVNNESSLSSTSKA-----TYSFT 338
Db 278 TADIVKPEIADIAYGA-----GRVNAVYKAIN--YDNYAKLVFTGYVANKGSQTHQFV 328
QY 339 ATAGKPKLISLVWSDAPASTASVTLVNDLNLVITAPNGTQVYVGNDFTSYNDNWDGRNN 398
Db 329 ISGASFTVATLYWDNAN-----SDDLILYDPNGNQ--VDYSYTAY-----G 369
QY 399 VENVFINAPSGTYTIEVQAYNVVPGPQTFSLAIVN 434
Db 370 FEKVGYNPTDGTWTKVWSYS---GSANYQVDVWS 402

RESULT 14
US-10-090-624-16
; Sequence 16, Application US/10090624
; Publication No. US20020132335A1
; GENERAL INFORMATION:
; APPLICANT: TAKAKURA, Hikaru
; APPLICANT: MORISHITA, Mio
; APPLICANT: SHIMOJO, Tomoko
; APPLICANT: ASADA, Kiyozo
; APPLICANT: KATO, Ikunoshin
; TITLE OF INVENTION: SYSTEM FOR EXPRESSING HYPERTHERMOSTABLE

; FILE REFERENCE: TAKAKURA=6
; CURRENT APPLICATION NUMBER: US/10/090,624
; CURRENT FILING DATE: 2002-03-06
; PRIOR APPLICATION NUMBER: 09/445,472
; PRIOR FILING DATE: 1999-12-06
; PRIOR APPLICATION NUMBER: 151969/1997
; PRIOR FILING DATE: 1997-06-10
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 16
; LENGTH: 654
; TYPE: PRT
; ORGANISM: Pyrococcus furiosus
US-10-090-624-16

Query Match 18.2%; Score 409; DB 13; Length 654;
Best Local Similarity 29.6%; Pred. No. 9.1e-27;
Matches 135; Conservative 60; Mismatches 147; Indels 114; Gaps 19;
QY 18 GLYGGQIVAVADTGLDTRNDSSMHEAFRGKITALYALGRNTNAN-----DTNGHGTH 71
Db 154 GYDGGITIGIITGID-----ASHPDLOGKV-----IGWDFVNGRSYPYDDHGHTH 202
QY 72 VAGSVLNGSTN-----KGMAPONLVFQSIM--DSGGGLGGLPSNLQTLFSQAYSAGARI 125
Db 203 VASIAAGTGAASNGKYKGMAPGAKLAGIKVLGADGGSGISTIIGVEMAVDNKDKYGIKV 262
QY 126 HTNSWGA-----AVNGAYTTDSRNVDDYVRKNDMTILFAAGNEGNGGTISAP 173
Db 263 INLSGSSQSSDGTALDQAVNAWDA-----GLVVVAAGNSGPNKTYIGSP 310
QY 174 GTAKNAITVGATENLRPSFGSYADNINHVAQFSRRGPTKDGRIKPDVMAPTFILSARSS 233
Db 311 AAASKVITVGA-----VDKYDVITTSFSSRGPTADGRLKPEVAVPAGNWIIAARAS 359
QY 234 LAPDSSFANHDSKYAYMGGTSMATPIVAGNVAQLREHFVKRGITPK--PSLLKAALIA 291
Db 360 ---GTSMGQIPINDYTAAPGTSMAITHVAGIAALLQ-----AHPSWTPDKVKTALIE 409
QY 292 GA-----ADIGLGPNGNCGWRVTLDKSLNVAIVNNESSLSSTSKA-----TYSFT 338
Db 410 TADIVKPEIADIAYGA-----GRVNAVYKAIN--YDNYAKLVFTGYVANKGSQTHQFV 460
QY 339 ATAGKPKLISLVWSDAPASTASVTLVNDLNLVITAPNGTQVYVGNDFTSYNDNWDGRNN 398
Db 461 ISGASFTVATLYWDNAN-----SDDLILYDPNGNQ--VDYSYTAY-----G 501
QY 399 VENVFINAPSGTYTIEVQAYNVVPGPQTFSLAIVN 434
Db 502 FEKVGYNPTDGTWTKVWSYS---GSANYQVDVWS 534

RESULT 15
US-10-112-488-39
; Sequence 39, Application US/10112488
; Publication No. US20030082746A1
; GENERAL INFORMATION:
; APPLICANT: KIKUCHI, Yoshiaki
; APPLICANT: DATE, Masayo
; APPLICANT: UMEZAWA, Yukiko
; APPLICANT: YOKOYAMA, Keiichi
; APPLICANT: MATSUI, Hiroshi
; TITLE OF INVENTION: PROCESS FOR PRODUCING TRANSLUTAMINASE
; FILE REFERENCE: 219286USOCONT
; CURRENT APPLICATION NUMBER: US/10/112,488
; CURRENT FILING DATE: 2002-04-01
; PRIOR APPLICATION NUMBER: PCT/JP00/06780
; PRIOR FILING DATE: 2000-09-29
; PRIOR APPLICATION NUMBER: JP2000-280098
; PRIOR FILING DATE: 2000-06-28
; PRIOR APPLICATION NUMBER: JP11-280098
; PRIOR FILING DATE: 1999-09-30
; NUMBER OF SEQ ID NOS: 70

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; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 39
; LENGTH: 1079
; TYPE: PRT
; ORGANISM: Streptomyces albobogriseolus
US-10-112-488-39

Query Match      16.3%; Score 366; DB 14; Length 1079;
Best Local Similarity 31.6%; Pred. No. 1.1e-22;
Matches 148; Conservative 55; Mismatches 175; Indels 90; Gaps 20;

QY 3 VAR-----GIVKADVAQS-----SYGHYGGQIVAVADTGLDGRNDSSMHEAFRG 48
Db 160 VARWLDGVRKASLDTSVGQIGTPKAWAEGYDGKVKI AVLDTGVD-----ATHPDLKG 213
QY 49 KITALYALGRTNANDTGHGTHVAGSVLGNLS-----TNKGMAPQANLVQSIINDSGGL 104
Db 214 QVTASKNTTSAPTTCGDVVGHGTHVASIAAGTGAQSKGYKGVAPGAKILNGKVLDDAG-- 271
QY 105 GGLPSNLQTLFQSAGARIHTNSWGAANVAVGAVTTDSRNVDYVRK--NDMTILF--AA 160
Db 272 FGDDSGILAGMEWAAAQAGADIVNMSLG---GMDTPETDPLEAAVDKLSAEKGILFAIAA 327
QY 161 GNEGPNGGTISAPGTAKNAITVGATENLRPSFGSYADNINHVAFSSRGP-TKDGRIKPD 219
Db 328 GNEGFPQ--SIGSPGADSALTVA-----VDDKDKLADFSSTGPRLGDGAVKPD 374
QY 220 VMAPGTFTILSARSSLAPDSSEFWANHDSKYAYMGGTSMATPIVAGNVAQLREHFVKRGIT 279
Db 375 LTAPGVDITAAKAGNDIAKEVGEKPGAYMTISGTSMATPHVAGAAALLKQOHE----- 429
QY 280 KPESLLKALTAGAADIGLG-YPNGNQWGRVTLDKSLNVAIVNESSLS----- 328
Db 430 WKYAEKGLTASTKD---GKYTPPEQSGRQVVDKAITQTIVIAEPVSLSPGVQGWPHAD 486
QY 329 ---TSOKATYSFTATAGKPLKISLWSD-----APAS--TTASVTLNDELNLVITAP-NG 377
Db 487 DXPVTKLTYRNLGHEDVTLKLTSTATGPKGAAPAGFTLCASTL-----TVPANG 538
QY 378 TOYVGNDFTPSYNDNDGRNNVNFINAPQS----GTYTIEVOAYNV 421
Db 539 TASVDVTADTRLGGAVDGTYSAYVAVATGAGQSVRTAAAVEREVESYNV 586
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Search completed: March 18, 2004, 04:12:40
Job time : 47 secs

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OM protein - protein search, using sw model

Run on: March 18, 2004, 04:07:02 ; Search time 45 Seconds
(without alignments)
2497.480 Million cell updates/sec

Title: US-09-985-689A-1

Perfect score: 2247

Sequence: 1 NDVARGIVKADVAQSSYGLY.....EVQAVNPVGPQTFSLAIVN 434

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 1049977 seqs, 258955339 residues

Total number of hits satisfying chosen parameters: 1049977

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA.*

- 1: /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep.*
- 2: /cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep.*
- 3: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.pep.*
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- 10: /cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep.*
- 11: /cgn2_6/ptodata/2/pubpaa/US09C_PUBCOMB.pep.*
- 12: /cgn2_6/ptodata/2/pubpaa/US09C_NEW_PUB.pep.*
- 13: /cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.pep.*
- 14: /cgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep.*
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- 16: /cgn2_6/ptodata/2/pubpaa/US10C_NEW_PUB.pep.*
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- 18: /cgn2_6/ptodata/2/pubpaa/US60_PUBCOMB.pep.*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	2247	100.0	434	10	US-09-985-689A-1
2	2247	100.0	434	15	US-10-385-662-2
3	2191	97.5	434	10	US-09-985-689A-2
4	2143	95.4	434	10	US-09-985-689A-6
5	2125.5	94.6	433	10	US-09-985-689A-7
6	1998.5	88.9	433	10	US-09-985-689A-5
7	1984.5	88.8	433	10	US-09-985-689A-3
8	1987.5	88.5	433	10	US-09-985-689A-4
9	1581.5	70.4	345	14	US-10-336-324-10
10	1581.5	70.4	345	14	US-10-403-105-13
11	452.5	20.1	659	13	US-10-090-624-12
12	414	18.4	412	13	US-10-090-624-1
13	414	18.4	522	13	US-10-090-624-4
14	414	18.4	654	13	US-10-090-624-16
15	366	16.3	1079	14	US-10-112-488-39

16	363.5	16.2	1208	14	US-10-156-761-13251	Sequence 13251, A
17	346.5	15.4	1139	14	US-10-156-761-10856	Sequence 10856, A
18	338	15.0	1237	14	US-10-314-657-4	Sequence 4, Appl
19	306.5	13.6	519	15	US-10-084-846A-114	Sequence 114, Appl
20	306.5	13.6	19725	15	US-10-084-846A-4	Sequence 4, Appl
21	304.5	13.6	1398	13	US-10-090-624-6	Sequence 6, Appl
22	283	12.6	580	10	US-09-927-827-55	Sequence 55, Appl
23	280.5	12.5	595	10	US-09-927-827-59	Sequence 59, Appl
24	276	12.3	418	9	US-09-966-921A-2	Sequence 2, Appl
25	270	12.0	1101	14	US-10-156-761-12934	Sequence 12934, A
26	258	11.5	663	12	US-10-424-593-255271	Sequence 255271, A
27	251	11.2	280	14	US-10-209-813-2	Sequence 2, Appl
28	251	11.2	397	10	US-09-779-334A-5	Sequence 5, Appl
29	248.5	11.1	368	12	US-10-344-231-3	Sequence 3, Appl
30	247	11.0	271	10	US-09-813-408-2	Sequence 2, Appl
31	246.5	11.0	379	10	US-09-813-408-6	Sequence 6, Appl
32	246	10.9	271	14	US-10-242-549-56	Sequence 56, Appl
33	244	10.9	271	14	US-10-242-549-46	Sequence 46, Appl
34	244	10.9	271	14	US-10-242-549-48	Sequence 48, Appl
35	244	10.9	271	14	US-10-242-549-50	Sequence 50, Appl
36	244	10.9	271	14	US-10-242-549-52	Sequence 52, Appl
37	244	10.9	271	14	US-10-242-549-54	Sequence 54, Appl
38	244	10.9	271	14	US-10-242-549-60	Sequence 60, Appl
39	242.5	10.8	627	10	US-09-927-827-60	Sequence 60, Appl
40	242	10.8	271	14	US-10-242-549-44	Sequence 44, Appl
41	242	10.8	271	14	US-10-242-549-58	Sequence 58, Appl
42	240	10.7	269	8	US-08-322-678-10	Sequence 10, Appl
43	240	10.7	269	9	US-09-837-235-16	Sequence 16, Appl
44	240	10.7	269	9	US-09-060-854B-6	Sequence 6, Appl
45	240	10.7	269	9	US-09-975-139-1	Sequence 1, Appl

ALIGNMENTS

RESULT 1
US-09-985-689A-1
; Sequence 1, Application US/0985689A
; Publication No. US20030022351A1
; GENERAL INFORMATION:
; APPLICANT: HATADA, YUJI
; APPLICANT: OGAWA, AKINORI
; APPLICANT: KAGEYAMA, YASUSHI
; APPLICANT: SATO, TSUYOSHI
; APPLICANT: ARAKI, HIROYUKI
; APPLICANT: SUMITOMO, NORIYUKI
; APPLICANT: OKUDA, MITSUOSHI
; APPLICANT: SAEKI, KATSUHIISA
; TITLE OF INVENTION: Alkaline proteases
; FILE REFERENCE: 215483USO
; CURRENT APPLICATION NUMBER: US/09/985,689A
; CURRENT FILING DATE: 2002-07-01
; PRIOR APPLICATION NUMBER: JP P2000-355166
; PRIOR FILING DATE: 2000-11-22
; PRIOR APPLICATION NUMBER: JP P2001-114048
; PRIOR FILING DATE: 2001-04-12
; NUMBER OF SEQ ID NOS: 7
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 1
; LENGTH: 434
; TYPE: PRT
; ORGANISM: Bacillus sp.
US-09-985-689A-1

Query Match 100.0%; Score 2247; DB 10; Length 434;
Best Local Similarity 100.0%; Pred. No. 8.2e-188;
Matches 434; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QY 1 NDVARGIVKADVAQSSYGLYCGQGIIVAVDTGLTGNDSSMHEAFRGKITALYALGRTN 60
Db 1 NDVARGIVKADVAQSSYGLYCGQGIIVAVDTGLTGNDSSMHEAFRGKITALYALGRTN 60
QY 61 NANDTNGHGTHTVAGSVLGNSTNGKMAPQANLVFQSIMDSGGGLGGLPSNLQTLFQSAYS 120

Db 61 NNDTNGHGHVAGSVLNGSTNGKMAPOANLVFOSIMDSGGGLGGLPSNLQTLFSQAYS 120
 QY 121 AGARIHTNSGAAVNGAYTTDSRNVDYVRKNDMTILFAAGNEGNGGTTISAPGTAKNAI 180
 Db 121 AGARIHTNSGAAVNGAYTTDSRNVDYVRKNDMTILFAAGNEGNGGTTISAPGTAKNAI 180
 QY 181 TVGATENLRPSFGSVADNINHVAQFSSRGPTKDGRIKPDVMAQPTFILSARSSSLAPDSSF 240
 Db 181 TVGATENLRPSFGSVADNINHVAQFSSRGPTKDGRIKPDVMAQPTFILSARSSSLAPDSSF 240
 QY 241 WANHDSKYAYMGTSMTATPIVAGNVAQLREHFVKNRGITPKPSLLKAALIAAGADIIGLY 300
 Db 241 WANHDSKYAYMGTSMTATPIVAGNVAQLREHFVKNRGITPKPSLLKAALIAAGADIIGLY 300
 QY 301 PNGNGQWGRVTLDKSLNVAIVYNESSLSSTOKATYSFTATAGKPLKISLVMSDAPASTTA 360
 Db 301 PNGNGQWGRVTLDKSLNVAIVYNESSLSSTOKATYSFTATAGKPLKISLVMSDAPASTTA 360
 QY 361 SVTLVNDLVLITAPNGTQYVGNDFTPYNDNWDGRNNVENVFINAPQSGTYTIEVQAYN 420
 Db 361 SVTLVNDLVLITAPNGTQYVGNDFTPYNDNWDGRNNVENVFINAPQSGTYTIEVQAYN 420
 QY 421 VPVGPTQTFSLAIVN 434
 Db 421 VPVGPTQTFSLAIVN 434

RESULT 2
 US-10-385-662-2
 ; Sequence 2, Application US/10385662
 ; Publication No. US20040002432A1
 ; GENERAL INFORMATION:
 ; APPLICANT: HATADA, YUJI
 ; APPLICANT: OGAWA, AKINORI
 ; APPLICANT: KAGEYAMA, YASUSHI
 ; APPLICANT: SATO, TSUYOSHI
 ; APPLICANT: ARAKI, HIROYUKI
 ; APPLICANT: SUMITOMO, NOBUYUKI
 ; APPLICANT: OKUDA, MITSUYOSHI
 ; APPLICANT: SAEKI, KATSUHIISA
 ; APPLICANT: KOBAYASHI, TOHRU
 ; APPLICANT: NOMURA, MASAFUMI
 ; TITLE OF INVENTION: Alkaline protease
 ; FILE REFERENCE: 234938US0
 ; CURRENT APPLICATION NUMBER: US/10/385,662
 ; CURRENT FILING DATE: 2003-03-12
 ; PRIOR APPLICATION NUMBER: JP 2002-081428
 ; PRIOR FILING DATE: 2002-03-22
 ; PRIOR APPLICATION NUMBER: JP 2002-165987
 ; PRIOR FILING DATE: 2002-06-06
 ; PRIOR APPLICATION NUMBER: JP 2002-304230
 ; PRIOR FILING DATE: 2002-10-18
 ; PRIOR APPLICATION NUMBER: JP 2002-304231
 ; PRIOR FILING DATE: 2002-10-18
 ; NUMBER OF SEQ ID NOS: 20
 ; SOFTWARE: Patent in version 3.1
 ; SEQ ID NO 2
 ; LENGTH: 434
 ; TYPE: PRT
 ; ORGANISM: Bacillus sp. KSM-KP43
 US-10-385-662-2

Query Match 100.0%; Score 2247; DB 15; Length 434;
 Best Local Similarity 100.0%; Pred. No. 8.2e-188;
 Matches 434; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 QY 1 NDVARGIVKADVAQSSYGLYGQGOIVAVADTGLDGTGRNDSNHEAFRGKITALVALGRTN 60
 Db 1 NDVARGIVKADVAQSSYGLYGQGOIVAVADTGLDGTGRNDSNHEAFRGKITALVALGRTN 60
 QY 61 NNDTNGHGHVAGSVLNGSTNGKMAPOANLVFOSIMDSGGGLGGLPSNLQTLFSQAYS 120
 Db 61 NNDTNGHGHVAGSVLNGSTNGKMAPOANLVFOSIMDSGGGLGGLPSNLQTLFSQAYS 120

QY 121 AGARIHTNSGAAVNGAYTTDSRNVDYVRKNDMTILFAAGNEGNGGTTISAPGTAKNAI 180
 Db 121 AGARIHTNSGAAVNGAYTTDSRNVDYVRKNDMTILFAAGNEGNGGTTISAPGTAKNAI 180
 QY 181 TVGATENLRPSFGSVADNINHVAQFSSRGPTKDGRIKPDVMAQPTFILSARSSSLAPDSSF 240
 Db 181 TVGATENLRPSFGSVADNINHVAQFSSRGPTKDGRIKPDVMAQPTFILSARSSSLAPDSSF 240
 QY 241 WANHDSKYAYMGTSMTATPIVAGNVAQLREHFVKNRGITPKPSLLKAALIAAGADIIGLY 300
 Db 241 WANHDSKYAYMGTSMTATPIVAGNVAQLREHFVKNRGITPKPSLLKAALIAAGADIIGLY 300
 QY 301 PNGNGQWGRVTLDKSLNVAIVYNESSLSSTOKATYSFTATAGKPLKISLVMSDAPASTTA 360
 Db 301 PNGNGQWGRVTLDKSLNVAIVYNESSLSSTOKATYSFTATAGKPLKISLVMSDAPASTTA 360
 QY 361 SVTLVNDLVLITAPNGTQYVGNDFTPYNDNWDGRNNVENVFINAPQSGTYTIEVQAYN 420
 Db 361 SVTLVNDLVLITAPNGTQYVGNDFTPYNDNWDGRNNVENVFINAPQSGTYTIEVQAYN 420
 QY 421 VPVGPTQTFSLAIVN 434
 Db 421 VPVGPTQTFSLAIVN 434

RESULT 3
 US-09-985-689A-2
 ; Sequence 2, Application US/09985689A
 ; Publication No. US20030022351A1
 ; GENERAL INFORMATION:
 ; APPLICANT: HATADA, YUJI
 ; APPLICANT: OGAWA, AKINORI
 ; APPLICANT: KAGEYAMA, YASUSHI
 ; APPLICANT: SATO, TSUYOSHI
 ; APPLICANT: ARAKI, HIROYUKI
 ; APPLICANT: SUMITOMO, NOBUYUKI
 ; APPLICANT: OKUDA, MITSUYOSHI
 ; APPLICANT: SAEKI, KATSUHIISA
 ; TITLE OF INVENTION: Alkaline proteases
 ; FILE REFERENCE: 215483US0
 ; CURRENT APPLICATION NUMBER: US/09/985,689A
 ; CURRENT FILING DATE: 2002-07-01
 ; PRIOR APPLICATION NUMBER: JP P2000-355166
 ; PRIOR FILING DATE: 2000-11-22
 ; PRIOR APPLICATION NUMBER: JP P2001-114048
 ; PRIOR FILING DATE: 2001-04-12
 ; NUMBER OF SEQ ID NOS: 7
 ; SOFTWARE: Patent in version 3.1
 ; SEQ ID NO 2
 ; LENGTH: 434
 ; TYPE: PRT
 ; ORGANISM: Bacillus sp.
 US-09-985-689A-2

Query Match 97.5%; Score 2191; DB 10; Length 434;
 Best Local Similarity 96.5%; Pred. No. 6.5e-183;
 Matches 419; Conservative 13; Mismatches 2; Indels 0; Gaps 0;
 QY 1 NDVARGIVKADVAQSSYGLYGQGOIVAVADTGLDGTGRNDSNHEAFRGKITALVALGRTN 60
 Db 1 NDVARGIVKADVAQSSYGLYGQGOIVAVADTGLDGTGRNDSNHEAFRGKITALVALGRTN 60
 QY 61 NNDTNGHGHVAGSVLNGSTNGKMAPOANLVFOSIMDSGGGLGGLPSNLQTLFSQAYS 120
 Db 61 NNDTNGHGHVAGSVLNGSTNGKMAPOANLVFOSIMDSGGGLGGLPSNLQTLFSQAYS 120
 QY 121 AGARIHTNSGAAVNGAYTTDSRNVDYVRKNDMTILFAAGNEGNGGTTISAPGTAKNAI 180
 Db 121 AGARIHTNSGAAVNGAYTTDSRNVDYVRKNDMTILFAAGNEGNGGTTISAPGTAKNAI 180
 QY 181 TVGATENLRPSFGSVADNINHVAQFSSRGPTKDGRIKPDVMAQPTFILSARSSSLAPDSSF 240
 Db 181 TVGATENLRPSFGSVADNINHVAQFSSRGPTKDGRIKPDVMAQPTFILSARSSSLAPDSSF 240

QY 241 WANHDSKYAYMGTSMTPIVAGNVAQLREHFVKNRGITPKPSLLKAALIAGAADIGLY 300
DB 241 WANHDSKYAYMGTSMTPIVAGNVAQLREHFVKNRGITPKPSLLKAALIAGAADIGLY 300
QY 301 PNGNQGWGRVTLDKSLNVAYNVNESSLSSTQKATYSFTATAGKPKLSLWSDAPASTTA 360
DB 301 PNGNQGWGRVTLDKSLNVAYNVNESSLSSTQKATYSFTATAGKPKLSLWSDAPASTTA 360
QY 361 SVTLVNDLDELITAPNGTQVGNDFTPYNDNWDGRNNVNFVFINAPQSGTYTIEVQAYN 420
DB 361 SVTLVNDLDELITAPNGTQVGNDFTPYNDNWDGRNNVNFVFINAPQSGTYTIEVQAYN 420
QY 421 VPVGPQTFSLAIVN 434
DB 421 VPVGPQTFSLAIVN 434

RESULT 4

US-09-985-689A-6

; Sequence 6, Application US/09985689A
; Publication No. US20030022351A1
; GENERAL INFORMATION:
; APPLICANT: HATADA, YUJI
; APPLICANT: OGAWA, AKINORI
; APPLICANT: KAGEYAMA, YASUSHI
; APPLICANT: SATO, TSUYOSHI
; APPLICANT: ARAKI, HIROYUKI
; APPLICANT: SUMITOMO, NOBUYUKI
; APPLICANT: OKUDA, MITSUYOSHI
; APPLICANT: SAEKI, KATSUHISA
; TITLE OF INVENTION: Alkaline proteases
; FILE REFERENCE: 215483US0
; CURRENT APPLICATION NUMBER: US/09/985,689A
; CURRENT FILING DATE: 2002-07-01
; PRIOR APPLICATION NUMBER: JP P2000-355166
; PRIOR FILING DATE: 2000-11-22
; PRIOR APPLICATION NUMBER: JP P2001-114048
; PRIOR FILING DATE: 2001-04-12
; NUMBER OF SEQ ID NOS: 7
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 6
; TYPE: PRT
; ORGANISM: Bacillus sp.
US-09-985-689A-6

Query Match 95.4%; Score 2143; DB 10; Length 434;
Best Local Similarity 93.5%; Pred. No. 1e-178;
Matches 406; Conservative 19; Mismatches 9; Indels 0; Gaps 0;
QY 1 NDVARGIVKADVAQSSVGLYGQCIIVAVADTGLDTRNDSSMHEAFRGKITAIYALGRIN 60
DB 1 NDVARGIVKADVAQSSVGLYGQCIIVAVADTGLDTRNDSSMHEAFRGKITAIYALGRIN 60
QY 61 NANDTNGHGHVAGSVLNGSTNKGMAPOANLVFQSIMDSGGGLGGLPSNLQTLFSQAYS 120
DB 61 NANDPNGHGHVAGSVLNGSTNKGMAPOANLVFQSIMDSGGGLGGLPSNLQTLFSQAYS 120
QY 121 AGARIHTNSGAAVNGAYTTDSRNVDDYVRKNDMTILFAAGNEGPNNGGTISAPGTAKNAI 180
DB 121 AGARIHTNSGAAVNGAYTTDSRNVDDYVRKNDMTILFAAGNEGPNNGGTISAPGTAKNAI 180
QY 181 TVGATENLRPSFGSYADNINHVAQFSSRGPTKDGRIKPDVMAFGPTILSARSLAPDSSF 240
DB 181 TVGATENLRPSFGSYADNINHVAQFSSRGPTKDGRIKPDVMAFGPTILSARSLAPDSSF 240
QY 241 WANHDSKYAYMGTSMTPIVAGNVAQLREHFVKNRGITPKPSLLKAALIAGAADIGLY 300
DB 241 WANHDSKYAYMGTSMTPIVAGNVAQLREHFVKNRGITPKPSLLKAALIAGAADIGLY 300
QY 301 PNGNQGWGRVTLDKSLNVAYNVNESSLSSTQKATYSFTATAGKPKLSLWSDAPASTTA 360

DB 301 PSGNQGWGRVTLDKSLNVAYNVNESSLSSTQKATYSFTATAGKPKLSLWSDAPASTTA 360
QY 361 SVTLVNDLDELITAPNGTQVGNDFTPYNDNWDGRNNVNFVFINAPQSGTYTIEVQAYN 420
DB 361 SVTLVNDLDELITAPNGTQVGNDFTPYNDNWDGRNNVNFVFINAPQSGTYTIEVQAYN 420
QY 421 VPVGPQTFSLAIVN 434
DB 421 VPVGPQTFSLAIVN 434

RESULT 5

US-09-985-689A-7
; Sequence 7, Application US/09985689A
; Publication No. US20030022351A1
; GENERAL INFORMATION:
; APPLICANT: HATADA, YUJI
; APPLICANT: OGAWA, AKINORI
; APPLICANT: KAGEYAMA, YASUSHI
; APPLICANT: SATO, TSUYOSHI
; APPLICANT: ARAKI, HIROYUKI
; APPLICANT: SUMITOMO, NOBUYUKI
; APPLICANT: OKUDA, MITSUYOSHI
; APPLICANT: SAEKI, KATSUHISA
; TITLE OF INVENTION: Alkaline proteases
; FILE REFERENCE: 215483US0
; CURRENT APPLICATION NUMBER: US/09/985,689A
; CURRENT FILING DATE: 2002-07-01
; PRIOR APPLICATION NUMBER: JP P2000-355166
; PRIOR FILING DATE: 2000-11-22
; PRIOR APPLICATION NUMBER: JP P2001-114048
; PRIOR FILING DATE: 2001-04-12
; NUMBER OF SEQ ID NOS: 7
; SOFTWARE: Patentin version 3.1
; SEQ ID NO 7
; LENGTH: 433
; TYPE: PRT
; ORGANISM: Bacillus sp.
US-09-985-689A-7

Query Match 94.6%; Score 2125.5; DB 10; Length 433;
Best Local Similarity 93.5%; Pred. No. 3.4e-177;
Matches 406; Conservative 19; Mismatches 8; Indels 1; Gaps 1;
QY 1 NDVARGIVKADVAQSSVGLYGQCIIVAVADTGLDTRNDSSMHEAFRGKITAIYALGRIN 60
DB 1 NDVARGIVKADVAQSSVGLYGQCIIVAVADTGLDTRNDSSMHEAFRGKITAIYALGRIN 60
QY 61 NANDTNGHGHVAGSVLNGSTNKGMAPOANLVFQSIMDSGGGLGGLPSNLQTLFSQAYS 120
DB 61 NANDPNGHGHVAGSVLNGSTNKGMAPOANLVFQSIMDSGGGLGGLPSNLQTLFSQAYS 119
QY 121 AGARIHTNSGAAVNGAYTTDSRNVDDYVRKNDMTILFAAGNEGPNNGGTISAPGTAKNAI 180
DB 120 AGARIHTNSGAAVNGAYTTDSRNVDDYVRKNDMTILFAAGNEGPNNGGTISAPGTAKNAI 179
QY 181 TVGATENLRPSFGSYADNINHVAQFSSRGPTKDGRIKPDVMAFGPTILSARSLAPDSSF 240
DB 180 TVGATENLRPSFGSYADNINHVAQFSSRGPTKDGRIKPDVMAFGPTILSARSLAPDSSF 239
QY 241 WANHDSKYAYMGTSMTPIVAGNVAQLREHFVKNRGITPKPSLLKAALIAGAADIGLY 300
DB 240 WANHDSKYAYMGTSMTPIVAGNVAQLREHFVKNRGITPKPSLLKAALIAGAADIGLY 299
QY 301 PNGNQGWGRVTLDKSLNVAYNVNESSLSSTQKATYSFTATAGKPKLSLWSDAPASTTA 360
DB 300 PNGNQGWGRVTLDKSLNVAYNVNESSLSSTQKATYSFTATAGKPKLSLWSDAPASTTA 359
QY 361 SVTLVNDLDELITAPNGTQVGNDFTPYNDNWDGRNNVNFVFINAPQSGTYTIEVQAYN 420
DB 360 SVTLVNDLDELITAPNGTQVGNDFTPYNDNWDGRNNVNFVFINAPQSGTYTIEVQAYN 419
QY 421 VPVGPQTFSLAIVN 434

Db 148 AGARIHNSGAPVNGAYTTDSRNVDYVRKNDMTILFAAGNEGSGTISAPGTAKNAI 207
Qy 181 TVGATENLRPSFGSVADNINHAQFSSRGPTKGRKIPDVMAPTFILLSARSSLPDSSF 240
Db 208 TVGATENLRPSFGSVADNINHAQFSSRGPTDGRKIPDVMAPTFILLSARSSLPDSSF 267
Qy 241 WANHDSKYAYMGTSMATPIVAGNVAQLREHFVKNRGITPKPSLLKALIAAGADIGLY 300
Db 268 WANHDSKYAYMGTSMATPIVAGNVAQLREHFVKNRGITPKPSLLKALIAAGADVGLGF 327
Qy 301 PNGNQGWGRVTLDKSLNV 318
Db 328 PNGNQGWGRVTLDKSLNV 345

RESULT 11
US-10-090-624-12
; Sequence 12, Application US/10090624
; Publication No. US20020132335A1
; GENERAL INFORMATION:
; APPLICANT: TAKAKURA, Hikaru
; APPLICANT: MORISHITA, Mio
; APPLICANT: SHIMOJO, Tomoko
; APPLICANT: ASADA, Kiyozo
; APPLICANT: KATO, Ikunoshin
; TITLE OF INVENTION: SYSTEM FOR EXPRESSING HYPERTHERMOSTABLE
; FILE REFERENCE: TAKAKURA-6
; CURRENT APPLICATION NUMBER: US/10/090,624
; PRIOR FILING DATE: 2002-03-06
; PRIOR APPLICATION NUMBER: 09/445,472
; PRIOR FILING DATE: 1999-12-06
; PRIOR APPLICATION NUMBER: 151969/1997
; PRIOR FILING DATE: 1997-06-10
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Patent in version 3.0
; SEQ ID NO 12
; LENGTH: 659
; TYPE: PRT
; ORGANISM: Thermococcus celer
US-10-090-624-12

Query Match 20.1%; Score 452.5; DB 13; Length 659;
Best Local Similarity 30.1%; Pred. No. 1.3e-30;
Matches 138; Conservative 67; Mismatches 153; Indels 101; Gaps 18;

Qy 8 KVADVAQSSYGLYGQGVAVADTGLDTCRNDSSHEAFRGKITALLY-ALGRTNNANDTN 66
Db 145 IGADFTVNSLGYDGGVVVAIVDTGIDAN-----HPDLKKGKVGWDVAVNGRSTPYDDQ 198
Qy 67 GGHGTHVAGSVLNGSTNK---GMAPOANLVFQSIM--DSGGGLGLPSNLQTLFSQAYS 121
Db 199 GGHGTHVAGSVLNGSTNK---GMAPOANLVFQSIM--DSGGGLGLPSNLQTLFSQAYS 121
Qy 122 GARI-----HTNSGAAVNGAYTTDSRNVDYVRKNDMTILFAAGNEGSGT 169
Db 259 GIRVINLSLGSQSSDGTSLSQAVNNAWDA-----GLVVCVAAGSGPNTYT 306
Qy 170 ISAPGTAKNAITVGATENLRPSFGSVADNINHAQFSSRGPTKGRKIPDVMAPTFILLS 229
Db 307 VGSPAAASKVITVGA-----VDSNDNIASFSSRGPTADGRKPEVAPGVADIIA 355
Qy 230 ARSSLAPDSSFWANHDSKYAYMGTSMATPIVAG-NVAQLREHFVKNRGITPK--PSLLK 286
Db 356 PRAS---GTSMGTPINDYYTAAPGTSMATPHVAGVAGLILQAH-----PSWTPDKVK 404
Qy 287 AALIA-----ADTGLGPNQGWGRVTLDKSL---NVAYNNESSLSSTSQATY 335
Db 405 TALIETADIVAPKEIADIAIGA-----GRNVVYKAIKYDDYAKLFTGTSVADKGSATH 457
Qy 336 SFTATAGPLKISLWSDAPASTTASVTLVNDLDELITAPNGTQYVGNDFTSYNDNDWDG 395
Db 458 TFDVSGATFVATLYWD-----TGSSDIDLILYDPNGNE-VDYSYTAY-----G 500

Qy 396 RNNVENFINAQSGTYTIEVQAVNVPVGPQTFFSLAIVN 434
Db 501 --GFEKVGYYNFTAGTWTWKVVSYK--GAANYQVDVVS 534

RESULT 12
US-10-090-624-1
; Sequence 1, Application US/10090624
; Publication No. US20020132335A1
; GENERAL INFORMATION:
; APPLICANT: TAKAKURA, Hikaru
; APPLICANT: MORISHITA, Mio
; APPLICANT: SHIMOJO, Tomoko
; APPLICANT: ASADA, Kiyozo
; APPLICANT: KATO, Ikunoshin
; TITLE OF INVENTION: SYSTEM FOR EXPRESSING HYPERTHERMOSTABLE
; FILE REFERENCE: TAKAKURA-6
; CURRENT APPLICATION NUMBER: US/10/090,624
; CURRENT FILING DATE: 2002-03-06
; PRIOR FILING DATE: 1999-12-06
; PRIOR APPLICATION NUMBER: 09/445,472
; PRIOR FILING DATE: 1997-06-10
; PRIOR APPLICATION NUMBER: 151969/1997
; NUMBER OF SEQ ID NOS: 33
; SOFTWARE: Patent in version 3.0
; SEQ ID NO 1
; LENGTH: 412
; TYPE: PRT
; ORGANISM: Pyrococcus furiosus
US-10-090-624-1

Query Match 18.4%; Score 414; DB 13; Length 412;
Best Local Similarity 29.8%; Pred. No. 1.5e-27;
Matches 136; Conservative 59; Mismatches 147; Indels 114; Gaps 19;

Qy 18 GLYGQGVAVADTGLDTCRNDSSHEAFRGKITALLYALGRTNNAN-----DTNGHGHGTH 71
Db 22 GYDGGGTTIGTIDTGTID-----ASHPDLQGRV-----IGWDFVNGRSYPYDDHGHGTH 70
Qy 72 VAGSVLNGSTN---KGMAPQANLVFQSIM--DSGGGLGLPSNLQTLFSQAYSAGARI 125
Db 71 VASIAAGTGAASNGKVKGMAPGAKLAGIKVLGADSGSGSIITIKGVENAVDNKDKYGIKV 130
Qy 126 HTNSWGA-----AVNGAYTTDSRNVDYVRKNDMTILFAAGNEGSGTISAP 173
Db 131 INLSLGSQSSDGTSLSQAVNNAWDA-----GLVVCVAAGSGENKTYTIGSP 178
Qy 174 GTAKNAITVGATENLRPSFGSVADNINHAQFSSRGPTKGRKIPDVMAPTFILLSARSS 233
Db 179 AAASKVITVGA-----VDKVDVTSSRGPTADGRKPEVAPGVAGVIAARAS 227
Qy 234 LAPDSSFWANHDSKYAYMGTSMATPIVAGNVAQLREHFVKNRGITPK--PSLLKALIA 291
Db 228 --GTSMGQPINDDYYTAAPGTSMATPHVAGVIAAALLQ-----AHPSTWPKVKTALIE 277
Qy 292 GA-----ADTGLGPNQGWGRVTLDKSLNVAAYNNESSLSSTSQKA-----TYSFT 338
Db 278 TADIVKPDISIADIAIGA-----GRVNAYKAIN--YDNAYKLVFTGYVANGSOTHQV 328
Qy 339 ATAGKPLKISLWSDAPASTTASVTLVNDLDELITAPNGTQYVGNDFTSYNDNDWDGRNN 398
Db 329 ISGASFTVATLYWDNAN-----SDLDLYLDPNGNQ--VDYSYATY-----G 369
Qy 399 RNNVENFINAQSGTYTIEVQAVNVPVGPQTFFSLAIVN 434
Db 370 FEKVGYYNFTAGTWTWKVVSYS---GSANYQVDVVS 402

RESULT 13
US-10-090-624-4
; Sequence 4, Application US/10090624
; Publication No. US20020132335A1
; GENERAL INFORMATION:

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Query Match      18.4%; Score 414; DB 13; Length 654;
Best Local Similarity 29.8%; Pred.No. 2.9e-27;
Matches 136; Conservative 59; Mismatches 147; Indels 114; Gaps 19;

QY 18 GLYGQGVAVADGLDTGRNDSMEAFRGKITALVALGRNNAN-----DTNGHGH 71
      ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| ||| |||
Db 154 GYDGSIGTIGITGID-----ASHPDLQGV-----IGWDFVNGRSYPDDHGHGH 202

V 72 VAGSVIANGNSTN-----KGMAPQANLVFQSTIM-----DSGGHGLGLPSNIQTFQSVASAGARI 125

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263 INLSGSSQSSDGGTALQSALVNAWDA-----GLVVVAAGNSGPNKTTIGSP 310
    : : : : : : : : : : : : : : : : : : : : : : : : : : : :
174 GTAKNAITVIGATENLRPSFGSYADNINHVAQFSRGPTKGRIKPDWAPGTFILSARSS 233
    : : : : : : : : : : : : : : : : : : : : : : : : : : : :
311 AAASKVITVGA-----VDKYDVTISFSSRGPTADGLKPEWAPGNWIIAARAS 359
    : : : : : : : : : : : : : : : : : : : : : : : : : : : :
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292 GA-----ADIGLYPNGNQGRVTLDKSLNAVYVNESSLSSTSQA-----TYSFT 338
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410 TADIVKPEIADIAYGA-----GRWNAYKAIN--YDNYAKLVFTGYVANKGSQTHQFV 460
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RESULT 15
US-10-112-488-39
; Sequence 39, Application US/10112488
; Publication No. US20030082746A1
; GENERAL INFORMATION:
; APPLICANT: KIKUCHI, Yoshiaki
; APPLICANT: DATE, Masayo
; APPLICANT: UMEZAWA, Yukiko
; APPLICANT: YOKOYAMA, Keiichi
; APPLICANT: MATSUI, Hiroshi
; TITLE OF INVENTION: PROCESS FOR PRODUCING TRANSLUTAMINASE
; FILE REFERENCE: 219286USOCONT
; CURRENT APPLICATION NUMBER: US/10/112,488
; CURRENT FILING DATE: 2002-04-01
; PRIOR APPLICATION NUMBER: PCT/JP00/06780
; PRIOR FILING DATE: 2000-09-23
; PRIOR APPLICATION NUMBER: JP2000-280098
; PRIOR FILING DATE: 2000-06-28
; PRIOR APPLICATION NUMBER: JP11-280098
; PRIOR FILING DATE: 1999-09-30
; NUMBER OF SEQ ID NOS: 70

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; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 99
; LENGTH: 1079
; TYPE: PRT
; ORGANISM: Streptomyces albogriseolus
US-10-112-488-39

Query Match      16.3%; Score 366; DB 14; Length 1079;
Best Local Similarity 31.8%; Pred. No. 9.4e-23;
Matches 148; Conservative 55; Mismatches 175; Indels 90; Gaps 20;

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QY      49 KITALYALGRTNNTANGHTHVAGSVLNGS----TNKGWAPQANLVFQSIMDSGGGL 104
Db      214 QVTASKNFTSAPTTGVDVGHGTHVASIAAGTGAQSGTYKGVAPGAKILNGKVLDDAG-- 271
QY      105 GGLPSNLQTLFSAQVSAGARIHTNSWGAAVNGAYTTDSRNVDYVRK--NDMTILF--AA 160
Db      272 FGDSGILAGMEWAAQAGADIWNLSLG----GMDTPETDPLEAAVDKLSAERKILFAIAA 327
QY      161 GNEGPNGGTISAPCTAKNAITVGCATENLRPSFGSYADNINHVAAQFSSRCP-TKDGEIKPD 219
Db      328 GNEGPQ--SIGSPGSADSALTVGA-----VDDKDKLADFSSTGPRLGCGAVKPD 374
QY      220 VMAPGTPILSARSLAPDSFMANHDSKYAYMGGTSMATPIVAGNVAQLREHFVKNRGIT 279
Db      375 LTAFGVDITAAAKGNDIAKEVGEKPGAYWTISGTSMATPHVAGAAALLKQOHPE----- 429
QY      280 PKSSLKAAALIAGAADIGIG-YENGNGQWGRVTLDKSLNVAVYNSSSL----- 328
Db      430 WKYAEKLGALTASTKD---GKYTPFEQSGRQVQDKAITQTVIAEPVSLSGVQOMPHAD 486
QY      329 ---TSOKATYSFTATAGKPKISLVMSD-----APAS--TTASVTLVNDLVLITAP-NG 377
Db      487 DKPVTKLTYRNLTGTEVDILKLTSTATGPKGKAAPAGFTLCASTL-----TVPANG 538
QY      378 TQYVGNDFTSFYNDNWDGRNNVENFINAPQS-----GTYTIEVQAINV 421
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